DOCUMENT RESUME

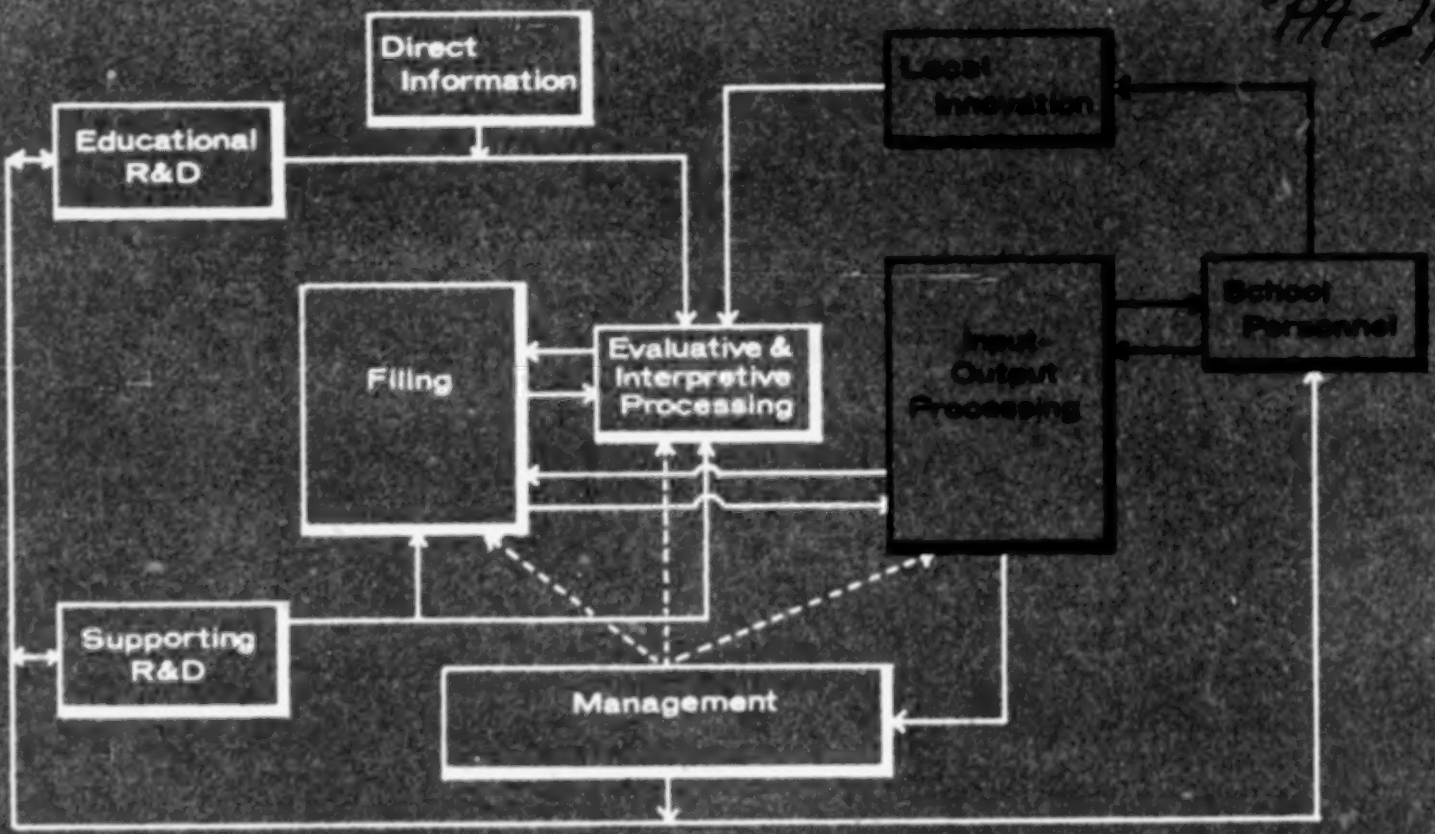
ED 026 747 24 EA 002 090

By-Chorness, M. H.; And Others
Use of Resource Material and Decision Processes Associated With Educational Innovation: A Literature Survey. Part I of a Study.
Far West Lab. for Educational Research and Development, Berkeley, Calif.; Stanford Research Inst., Menlo Park, Calif.
Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.
Bureau No-BR-6-2931
Pub Date Feb 69
Contract-OEC-4-7-062931-3064
Note-158p.
EDRS Price MF-$0.75 HC-$8.00
Descriptors-Administrator Role, *Annotated Bibliographies, Change Agents, *Decision Making, Educational Change, *Educational Innovation, Educational Research, Literature Reviews, Principals, *Public Schools, Research Utilization, *Resource Materials, Superintendents, Teacher Role
Identifiers-Far West Laboratory for Educational R and D

This annotated bibliography and literature review covers educational literature concerned with the decision making process, innovation, organization for change, sources of information regarding educational change and innovation, and the role which various agents in the field of education play in the decision making process. A special emphasis has been placed on studies concerned with the decision making process preceding educational change, especially those studies which have yielded empirical findings. A related study in the form of a field survey on the same topic area is presented in a separate volume, EA 002 091. (HW)

ED026747

BR-6-2931
OE-BR
PA-24


Direct Information
Educational R&D
Local Innovation
Filing
Evaluative & Interpretive Processing
Input-Output Processing
School Personnel
Supporting R&D
Management

USE OF RESOURCE MATERIAL & DECISION PROCESSES ASSOCIATED WITH EDUCATIONAL INNOVATION

A LITERATURE SURVEY

PUBLISHED BY
FAR WEST LABORATORY FOR EDUCATIONAL
RESEARCH AND DEVELOPMENT
1 Garden Circle, Hotel Claremont, Berkeley, California 94705

EA 002 090

THE FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT is a public, non-profit organization supported in part as a regional educational laboratory by funds from the U. S. Office of Education, Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

The Laboratory was established through a Joint Powers Agreement in February, 1966. Signatories as of December 31, 1968, included:

- The Regents of the University of California
- The California State Board of Education
- The Trustees of the California State Colleges
- The County Superintendent of Schools of the County of Monterey
- The Board of Education of the San Francisco Unified School District
- The Regents of the University of Nevada
- The Nevada State Board of Education

Dissertation abstracts referenced herein courtesy of University Microfilms, Inc., Ann Arbor, Michigan.

FAR WEST LABORATORY FOR EDUCATIONAL
RESEARCH AND DEVELOPMENT
1 Garden Circle, Hotel Claremont
Berkeley, California 94705
(415) 841-9710

Printed in U. S. A.

2-69

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025

USE OF RESOURCE MATERIAL AND DECISION PROCESSES ASSOCIATED WITH EDUCATIONAL INNOVATION: A LITERATURE SURVEY

M. H. Chorness

C. H. Rittenhouse

R. C. Heald

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Report to Far West Laboratory for Research and Development

This report represents Part I of the results of a study being performed by Stanford Research Institute for the Far West Laboratory for Research and Development, Berkeley, California.

FORWARD

The goal of the Communication Program is to increase the ability of school personnel to make effective decisions regarding the use of the products of educational research and development. The immediate objectives of the program are (1) to develop and evaluate methods for presenting general R & D information based upon investigations of the needs and interests of school personnel; (2) to develop prototype systems for providing comprehensive and well-evaluated specific information; and (3) to investigate and develop organizational arrangements and training methods that will improve the R & D information utilization and decision-making process in the schools.

ED 022 441

In a report entitled Educational R & D Information System Requirements existing conditions, a model system, and immediate requirements were outlined. The schema for that system appears on the cover of this report. Previous to the publication of the system requirements report a brief literature search, a few field interviews, and a sampling survey had been completed. These are reported in Communication and Utilization Study for Educational Research and Development and in Communication Program Survey, Spring 1967. With a better definition of requirements there was a need to conduct a more comprehensive search of the literature and to investigate, through survey and questionnaire, the details of decision processes and information needs as they pertain to the use of R & D information in elementary and secondary school systems. The literature search and questionnaire survey are complementary studies, conducted under subcontract by the Stanford Research Institute, designed to provide the Communication Program with an independent appraisal of what the literature has to offer and what the user in the schools has to say about educational R & D information needs and utilization.

In this report will be found an annotated bibliography as well as a listing of a larger number of documents which were examined by SRI in completing the literature survey. A companion report entitled, Decision Processes and Information Needs in Education: a Field Survey describes the results of the questionnaire study.

Other related reports by the Communication Program include: Organizational Arrangements and Personnel Training Programs for Effective Use of R & D Information in Decision Making Processes of School Systems, What About the School Research Office? and The Research and Instruction Unit as an Organizational Arrangement to Increase the Utilization of Research Related Information.

PAUL D. HOOD
Director
Communication Program

TABLE OF CONTENTS

Page

Introduction 1

Summary Review of Annotated Literature on the Uses of Educational Resource Material and the Decision Processes Associated with Educational Innovation 7

Annotated Literature 17

Index to Annotated Literature 127

Bibliography 141

INTRODUCTION

Objectives

The Communication Program of the Far West Laboratory for Educational Research and Development has defined two of its major goals as the improvement of the accessibility to school personnel of information regarding educational research and development, and the provision of an information base for effective decision-making. This study, undertaken by Stanford Research Institute, supports these goals.

The study has two primary objectives:

1. To conduct a Literature Survey of the Use of Educational Resource Material and the Decision Processes Associated with Educational Innovation.
2. To conduct a Field Survey of the Decision Processes and Related Informational Requirements for Educational Planning and Innovation.

In order to meet the requirements of the first objective, an exhaustive search of educational literature concerned with the decision-making process, innovation, organization for change, sources of information regarding educational change and innovation, and the role which various agents in the field of education play in the decision-making process.

In general, this report has emphasized studies concerned with the decision process preceding educational change, especially those studies which have yielded empirical findings. Those studies or reports which met these general criteria have been annotated. However, descriptive papers especially relevant to the educational change process and the objectives of this study have also been included in the annotated literature. In addition, a reference bibliography includes those papers which had a bearing upon the topic under investigation but which have not been annotated.

Much of the current literature dealing with the phases of the educational change process (research, development, diffusion, dissemination, adoption) is concerned with newly developing roles for change agents, and the new organizational structures which provide for an orderly pattern of change. Most of this literature is descriptive. After completing our survey, we feel that more empirical findings may emerge with respect to the decision process itself, the sharing of this process in innovation and change, and the impact of new organizational structures upon the frequency of enduring change.

The annotated material reflects the dearth of findings regarding the informational requirements which underlie the decision process. We would expect that this situation would be remedied in the future as educational research and development organizations such as the Far West Laboratory give an increasing amount of attention to the establishment of educational information systems.

Annotated literature of the kind which has received our attention will become outdated unless it is augmented by periodic surveys. In time, a source book might emerge on the essential elements of and findings about educational decision-making.

The second objective of this study has been to develop and administer a field questionnaire to a sample of personnel in education, ranging from superintendents and their staffs to principals and teachers. This field survey was intended to supplement the literature survey; to verify, in limited ways, certain previous findings; and to uncover new information about the essential ingredients of educational decision-making with respect to informational sources, relative criticality of educational decisions, problems inherent in the decision process, and primary sources of information regarding innovation and change. The survey, which included personnel in approximately 65 school districts in three counties within the San Francisco Bay Area, is now being analyzed statistically. The results of this field survey will be published as Part II of this report.

SUMMARY REVIEW OF ANNOTATED LITERATURE ON THE USES OF EDUCATIONAL RESOURCE MATERIAL AND THE DECISION PROCESSES ASSOCIATED WITH EDUCATIONAL INNOVATION

The "information explosion" of recent years has included a vast and rapidly increasing quantity of literature concerned with educational change. Although much of it is diffuse and rather generalized, a significant proportion has an operational focus. This study is oriented toward that proportion. Since the literature is extensive, the study has been further delimited to include examination of findings regarding (1) the utilization of results obtained from educational research and (2) the decision processes associated with educational innovation.

With these two criteria as a guide, a substantial bibliography was assembled. Appropriate references for annotation were selected from this bibliography, which included much general literature on educational innovation, diffusion of findings, research utilization, strategies for change, etc. Careful examination of the materials produced only a limited number of reports on specific decision and change processes. The connection between research findings and decision processes is documented in those reports, which are annotated.

Compendia of the Products of Innovation

Several compendia of educational innovations were examined and annotated, including classification of innovations by nature and area of change, source of innovative ideas, motivation for change, type of district (including level of financing), grade levels, costs, physical changes in plant and equipment required, deterring and facilitating factors, evaluation of new programs, and programs which were dropped or modified on the basis of experience.

The compendia do not, in general, contain sufficient information about specific innovations to permit assessment of the use of research findings in the change process, identification of decision-makers or the decision process, means of implementation of change, or specific evaluations. They do, however, provide a useful source of information on the number of innovations which are occurring and the range of areas in which they occur. They also provide a means of identifying the school districts in which innovation is being actively promoted so that additional information can be obtained directly from them.

While most of the compendia are limited to individual states, one gives rates of adoption and abandonment of innovations, as well as the positive and negative factors involved, in more than 7,000 high schools throughout the United States (12). The most commonly adopted innovations were those associated with language laboratories, work-study programs, physics, team teaching, and chemistry. Innovations most often abandoned were associated with mathematics, honor study halls, programmed instruction, team teaching, and television instruction. The highest abandonment rate is associated with honor study halls; six per cent of the schools adopting them later abandoned them.

Characteristics associated with a high degree of innovation, as indicated by the compendia (12, 26, 27, 49, 50, 51, 60), include:

1. Urban or suburban location of schools
2. Large enrollment for greater quantity and flexibility of resources
3. Ample financing from external or internal sources
4. Upper grade levels
5. Positive staff attitudes

6. Local or informal contact source of new ideas (research findings not a major source)
7. Response to problems perceived locally

The most common areas of innovation in grade schools were language arts, mathematics, reading, foreign languages, and science.

The Process of Innovation

A study of innovation in small schools in North Dakota (26) indicated that innovation areas with the widest participation were technological developments and correspondence courses; those areas of least participation in innovation were team teaching, school aides, shared services, multiple classes, and non-graded procedures.

Innovators in general (54) are young, have high social status based on education and income, use broader and more impersonal sources of information (including lab and experimental schools, universities and conferences), are cosmopolitan, are opinion leaders, and are often seen as nonconformists both by their peers and by themselves.

A study comparing high-innovating and low-innovating schools in Detroit (19) indicated that faculty members in the high-innovating schools: (1) felt that there was not enough contact with other faculty and professional personnel; (2) tended to conform closely with the rules, procedures and policies of the school; and (3) saw a greater need for curriculum revision by the faculty.

The study also showed that faculties in low-innovating schools, when compared to high-innovating schools, felt: (1) that they participated more in making school policies, rules, and procedures; (2) that more curriculum changes had been made in recent years; (3) that the quality of educational leadership was higher; and (4) that they had developed a greater need for interdependence and "sticking together" against outside criticism.

Finally, the faculties in high-innovating schools were better prepared academically, were older, and had had more teaching experience.

Individual Roles in Change

A substantial number of the annotated studies were concerned with the roles and behaviors of individuals involved in the change process and with the characteristics of individuals associated with high levels of innovation as compared with those associated with low levels of innovation.

Superintendents

One study (35) found significant differences in the characteristics of superintendents in innovative and non-innovative districts: (1) administrators in innovative districts use more sources of information for new curriculum practices than those in non-innovative districts; (2) innovative district heads have more years of experience as educators than do heads of non-innovative districts; (3) superintendents in innovative systems use the teaching staff more widely in curriculum change than do those in non-innovative systems; (4) superintendents of innovative districts recognize the worth and dignity of their staffs more than do those heading non-innovative districts; (5) superintendents in innovative districts earn a greater number of semester hours past the bachelor's degree; and (6) read more professional journals.

Principals

Principals are key figures in promoting and influencing innovation. One study (13) indicated that the amount of staff inventiveness depends heavily on the staff's perception of the principal's support of innovative teaching. In addition, the principal must have an accurate perception of the skills of his staff and of their feelings and values about education.

The principal who publicly supports new classroom practices is more likely to have innovative teachers.

Another study (14) indicated that immediate availability of funds was a primary factor influencing principal's decisions to innovate when change seemed to require some immediate expenditure. Principals saw situational factors such as staff and school board support as being of primary importance in deciding whether to adopt innovations. They relied heavily on administrative authority in making decisions. Team teaching, variations in class size, and the use of teacher aides were innovations being favorably considered, while educational television and flexible scheduling were least likely to be adopted.

Innovativeness of principals, according to a third study (23), was positively related to their attitudes toward research and innovation, the extent of dissemination practices in the district, and whether his superiors' mode of operation was democratic or less democratic. Innovativeness was negatively related to years as a principal in the present building and total years of administrative experience. These principals tended to implement innovations that did not require additional funds or system-wide cooperation. They had a favorable but realistic attitude toward professional literature. They believed that their superiors were favorably disposed toward research and innovation and that their teachers were very competent to participate in research and development activities. They felt they did have authority to implement change and that they should be leaders in the process.

Evidence from another study (24) suggests that both personal and organizational factors are important in principals' actions regarding innovation. Principals tended to make decisions which they felt would meet with the approval of their superiors; but, as a result of communication failures, they often failed to perceive accurately what superior expectations might be.

Teachers

An Oregon study (8) indicated that teachers feel they are not involved in education decision-making to the extent that they should be. Curiously, administrators, board members, and teachers agreed that teachers should participate at a higher level in those community matters not related to education than in those related to education.

Teachers' perceptions of conditions influencing change and their roles in innovation were the subject of another study (17). Teachers felt that successful implementation of change required adequate teacher training, guidance, time and resources. Satisfactory interpersonal relations and the development of security feelings were also regarded as important. However, in-service education, supervisory help, and administrative guidance were not thought to be of much value in implementation. Teachers felt their principal role was in the implementation phase, with little involvement in planning or instigation. Although they saw themselves as autonomous independent individuals who favored innovation, they seldom instigated change processes.

According to a study of the sources and processes of innovation (44), the teacher's role in innovation was small. Although teachers were expected to be creative, they were not major innovators. The reason for this seemed to be a lack of effective communication of research and innovative practices to the classroom teacher.

Certain areas of innovation appeared to elicit more teacher involvement than others (58). These included instructional materials, pupil conduct, setting goals, grouping, promotion, and grading practices. Teachers were not, in general, interested in the planning of buildings, class scheduling, financing, and the evaluation of certificated or non-certificated personnel.

Decision-Making

The relationship of information processes to decision-making was explored in a number of the annotated studies. One study (29) indicated that decentralization of school administration brought decisions closer to actual needs and thereby improved the organization.

The variable of personal interaction in decision-making was studied, using school administrators as subjects (36). The administrators indicated a preference for democratic group discussion procedures, but the study results suggest that group discussion or decisions reached by consensus tend to inhibit individual creativity of the participants and thereby to reduce the quality of decisions reached.

A study of decision-making in science education indicated the levels at which various kinds of decisions were made. Policy decisions were made at the administrative (superintendent) level in matters affecting the entire school system or community relations. At the attendance level (individual school), decisions relating to that school were the primary focus. Science department heads participated in both administrative and instructional decision-making. Teachers were seen as minimal participants in the decision process. Curriculum was regarded as being the most important decision area.

A mathematical model for educational decision-making was developed in another study (46). Postulates of the model include the following:

1. Effectiveness of organizational administration is related to the effectiveness of administrative decisions and of the activities of the organization.

2. Effectiveness of the organizational administration is a function of (a) the composition and interorganizational relationships of the structural units, (b) the concordance of the formal and informal structure, (c) the number of control actions needed to assure that the activities of the organization correspond with administrative decisions, (d) the effectiveness of internal communications, and (e) the administrators' perception of the organization.
3. The effectiveness of a proposed organizational activity may be predicted by multiplying the probability of goal attainment by the degree of importance attached to the goal.
4. The effectiveness of individual administrators may be measured.

The interrelationships among authority structure, centralization of decision-making, and agreement of staff perceptions of decision-points were investigated in another study (48). A significant relationship was found between a flat, broad authority structure and a greater degree of centralization of decision-making. Relationships varied depending on the decision area under consideration, so that organizational analysis should be done on an individual task area basis rather than across all task areas.

A Texas study classified decisions made in administering elementary and secondary schools according to content and specified the locus of various kinds of decisions (55). The investigation concluded that decisions in all content areas had been made in all loci, but that the total amount of decision-making varied considerably from one level to another.

A study of school board decision-making patterns (56) concluded that this particular board tended to follow the superintendent's recommendation on more than 80 percent of the agenda items. Certain areas, however, resulted in more questioning of the superintendent's recommendations. These included buildings and properties, resignations and dismissals (but not employment), curriculum, and "add-to" items.

Secondary school administrative decision-making was related to school quality in one study (57). In the better school:

1. The principal accepted confidently authority delegated from the superintendent who functioned as chief administrative officer.
2. The organizational structure was more complex, but was better understood.
3. The principal was regarded as the instructional leader.
4. The principal had major responsibility for determining financial need in most areas.
5. The principal had primary responsibility for long-range planning and overall evaluation and was responsible for keeping the superintendent informed.

Quality in school operation was determined to be more dependent upon the manner in which responsibilities are shared than upon the fact that they are shared.

ANNOTATED LITERATURE

16/17

Robert James Addington Number 1

A SAMPLING TECHNIQUE FOR ADMINISTRATIVE DECISION MAKING IN EDUCATION

Dissertation Abstract 26, p. 3118 (1965)

It was the purpose of this study to assist those with responsibilities for administrative decision making through the designing and testing of probability sampling techniques for educators in California. The main aspects of the study were: (1) to determine the total number of certificated personnel in the public schools and County offices in California and the public school population in California for the school year 1962-1963; (2) to arrive at a method for the selection of certificated public school and county office personnel for purposes of distribution of a survey questionnaire; (3) to distribute the survey instrument and secure its return, completed, from each person queried; (4) to analyze the data to determine response rates and to ascertain the degree of similarity of responses.

The first step was to stratify the population to be studied according to the following criteria: (1) geographical location, (2) size of school district, (3) level of assignment in the school district or agency. Following a random selection of 1800 individuals from the population stratification, twelve sub-samples numbering 150 each were mailed a questionnaire guaranteeing anonymity to the respondent. Procedures for follow-up included, a second questionnaire mailing, a post card reminder, and a telegram. The complete returns were treated by standard statistical analysis measures, namely Chi-square comparison and the t-ratio test for the significance of the difference between means. The null-hypothesis was established that there was no significant difference between the means of the sub-sample and the population studied.

Findings. (1) Of the 1800 mailed survey questionnaires there were 1614 responses, representing a response rate of 89.7 percent. (2) Sub-sample response rates varied from 140 out of 150 or 98.7 percent to 119 out of 150 or 79.3 percent. (3) Six of twelve sub-samples had response rates of 90 percent or higher. (4) The null-hypothesis was accepted in all but 54 of 2262 Chi-square comparisons of the twelve sub-sample responses or 2.47 of the cases. (5) Upon combining responses to a sub-sample base size of 300, Chi-square comparisons yielded acceptance of the null-hypothesis in all but 9 of 1913 comparisons or 0.47 percent of the cases. (6) A t-ratio comparison of sub-samples from the upper quartile and fewer quartile of sub-sample responses to the population of educators on salaries paid in 1962-1963 school year yielded t-ratios which supported the null-hypothesis.

Conclusions. (1) It is possible to draw a sample of 150 individuals who are certificated employees of public schools and County offices in California for the purpose of inquiry on specific items or questions. (2) It is possible following procedures in the study to acquire dependable responses regarding opinion, attitudes, and factual data from the population of educators in the state. (3) There were no significant differences between the samples selected in the survey. (4) High rates of response in the survey indicated that a sample with nearly 100 percent response had a mean approximately the same as the mean of the population studied when compared on salary paid.

Virgil E. Blanke   Number 2

PLANNED CHANGE, PUBLIC EDUCATION AND THE STATE

Ohio State University, A paper presented April 5, 1967 at an eight-state project, "Designing Education for the Future"

Blanke makes the interesting point that school districts have never taken the problem of development as seriously as industry and the Federal government have. He perceives an absence of the characteristics of the R&D cycle through which systems have been brought to operational states which include such steps as mission or problem definition, determining relationships between variables (subsystems) and goals, analysis of probabilities with respect to success or failure, etc.

He stresses the approach of Clark and Guba on the diffusion process which espouses the need to: (1) inform target systems about packages and programs; (2) demonstrate the effectiveness of packages and programs; (3) train target systems in new programs; (4) service and nurture installed innovations.

ESEA Titles I, III & IV projects are welcomed but Blanke sees the need to vitalize existing institutions (State Departs., Universities, school systems) in the direction of development projects. He defines the new math, sciences, and economics as development. Teacher self-assessment projects (Strom and Gulloway, Ohio State) are also defined as development. Blanke pushes strongly for development projects at all levels (State, University, local, etc.). Special functions and interactions among such agencies also are discussed.

Betty Wells Bond Number 3

THE GROUP DISCUSSION-DECISION APPROACH--AN APPRAISAL OF ITS USE IN HEALTH EDUCATION

Dissertation Abstract 16, p. 903 (1956)

Previous studies by Lewin and his associates indicated that group discussion, with ensuing group decision, was more effective than other methods of instruction in influencing behavior.

The present study compared the effectiveness of two methods, (1) lecture and (2) group discussion-decision, in a health education program concerned with chronic illness. The problem chosen was breast cancer in women, mainly because criteria of success in that field were fairly amenable to objective measurement.

One main hypothesis was considered. Stated in the usual null hypothesis form, it is that group discussion-decision methods do not result in a significantly higher level of motivation toward the advocated health practices than would be attained by providing the same information through lectures.

The three criteria of success adopted were (1) the obtaining of a breast examination from the woman's physician to determine the normality of her breast tissue. (2) the practice of monthly breast self-examinations and (3) demonstration to the physician or his assistant of her technique of breast self-examination.

The groups selected were small pre-existing groups, not organized around any health subject, with a typical size of 10 to 14 women. At the original meetings, 933 women were present.

Two interview follow-ups were made, a preliminary one within seven months and the final follow-up thirteen months after the meetings.

Comparison of the two groups (discussion-decision and lecture) as to personal characteristics showed them to be homogeneous with respect to the marital status, attachment to persons with cancer, group memberships, and leadership positions held in various organizations. However, the discussion-decision group contained a higher percentage of young women (under 40 years of age). There was also some doubt as to the comparability of their formal schooling. Various measures of group cohesiveness failed to show any significant differences between the two groups.

The major hypothesis of this study was rejected, since there were statistically significant differences favoring the discussion-decision group (at the .01 level) on all three stated criteria of success, both at the preliminary and the thirteen-month follow-ups.

The data were also studied to determine possible relationships among other variables and the performance of these women on the criterion measures. None of these variables sustained a consistent relationship for both the discussion-decision and lecture groups on the various recommended practices.

The differences between the discussion-decision and lecture groups were even more marked at thirteen than at seven months; on the criterion (breast self-examination) which demanded continuing effort, the performance of the women in the discussion-decision group had increased while that of the lecture group had decreased.

The evidences thus pointed quite consistently to the superiority of the discussion-decision approach in motivating women toward advocated health practices.

Chester Sevane Bumbarger Number 4

DIFFERENCES IN TEACHER AND ADMINISTRATOR PERCEPTIONS OF PUBLIC SCHOOL DECISION-MAKING: A COMPARATIVE STUDY IN SELECTED OREGON SCHOOL DISTRICTS

Dissertation Abstract 27-9A (1966)

Under the assumption that school districts are characterized by a hierarchical organizational pattern, and stemming from the work of Herbert A. Simon and others, this study investigated teacher and administrator understanding of the differentiation of decision-making which is a reflection of organizational form. The research was conceptualized as a comparative study examining differences in the responses of the sample population as shown by the assignment of specific organizational responsibility for accomplishing specified decisions. It was proposed that a high level of differentiation of decision-making would be reflected in the absence of disagreement concerning responsibility for decisions between incumbents of positions at differing levels in the organization, since effective diffusion of decision-making authority would require agreement upon those aspects of problem situations which determine the appropriate level for solution.

Data were collected through use of an instrument developed for the study. The questionnaire was of the vignette type, consisting of seventy-five briefly described problem situations common to public school operation. The item statements formed five decision categories in accord with the functions of school administration, identified as the areas of Auxiliary Services, Business and Buildings, Curriculum and Instruction, Information and Advice, and Personnel. Two versions of the instrument, with identical item statements but with differing orientations produced through different instructions, were constructed in order to locate differences in responses dealing with the ideal or most appropriate location for the decisions as compared with their actual or real-life location.

The analysis revealed:

1. Higher agreement upon both the proper location and the actual location for decisions among administrators than among teachers.

2. A remarkable lack of significant disagreement among administrators, both within each of the two groups and between the two versions of the instrument. Much less disagreement existed among administrators than among teachers.

3. Somewhat less disagreement among administrators concerning actual decision practice than the ideal location for decision-making.

4. Little significant disagreement among teachers concerning the ideal location for decision-making except in personnel matters.

5. More teacher disagreement regarding actual decision-making practices than about the ideal location for decisions. Young teachers differed significantly from all other teachers concerning the realities of decision-making practice.

6. That teachers differed significantly from administrators in their responses to both forms. However, concerning the ideal location for decisions, it was the 31-40 year age group or those teachers with 6-15 years of experience who differed from the administrators.

7. That the decision categories with the greatest disagreement between the two hierarchical levels were those of Information and Advice and Curriculum and Instruction.

8. That in their perceptions of actual decision-making practice, teachers as a group assigned decision responsibility lower in the hierarchical scale for all comparisons than did administrators.

Reuben James Camaren Number 5

INNOVATION AS A FACTOR INFLUENCING THE DIFFUSION AND ADOPTION PROCESS

Dissertation Abstract 27-3A (1966)

A number of researchers have tended to regard innovations as equivalent units from the point of analysis. Empirically, the equivalent unit approach is inconsistent with reality. The purpose of this study was to determine whether innovations as relevant variables influence a differentiation in their social itinerary.

A curricular practice (PSSC Physics) and an organizational form of instruction (Team Teaching) were the innovations selected for analysis. The investigation involved the adoption of an innovation over time, by an adopting unit (the school), in a given social setting.

Sample selection was by districts containing high schools stratified as to size, wealth, and demographic characteristics. The final sample consisted of 65 high schools representing two ends of the Gemeinschaff Gesellschaft social concept scale.

The data obtained through interviews with principals consisted mainly of: (1) the date of adoption of the innovation in each school (if adopted); (2) the communicatory sources by which information and influence about the innovation entered the system from the "outside"; and (3) the processes relating to decision regarding and implementation of the particular innovation. Data with respect to innovation characteristics were functionally determined. Treatment of the data was through empirical and logical analysis.

The findings indicate that the diffusion of an innovation is not the result of a single element but rather the result of a complex set of elements, including some pertaining to the innovation. The findings suggest the importance of three main types of variables related to the diffusion of PSSC and Team Teaching: (1) those related to the attributes of the innovation--those which can be considered as intrinsic, such as divisibility, communicability, and costs--and those which accrue to the innovation, such as pervasiveness, compatibility, and legitimacy; (2) those related to the access to and acceptance of influence stemming from outside the system, such access and acceptance depending on the individual's placement in the social structure, the target unit to which the innovation is directed, the extent to which outside agencies actively promote alternatives, or whether the potential adopter actively searches for alternatives; (3) those which may be considered as related to the innovation's unit of adoption, the decision-making ability of the potential adopter, the time of adoption, and the scale of operations of the institution for which the innovation is intended.

In general, more rapid acceptance is accorded innovations whose consequences of adoption are insular rather than pervasive, which focus on improving process rather than products, and whose acts of adoption are overt rather than ideological. Innovations in which influence is external to the social system for which intended are apparently unaffected by social systems boundaries, whereas those stemming from inside diffuse faster within than across differentiated segments of community structure. Innovations involving changes which relate to the improvement of instruction directly in contrast to innovations which have as their function the improvement of instruction indirectly are difficult to adopt without the pre-trained recipient. The adoption of such innovation is frequently due to their advocacy by teachers following a relearning experience. Innovations which involve the implementation of changes which lead to more efficient utilization of available talent are often adopted by administrative prescription or are the result of the communication of a decision from administrator to teacher.

Number 6

Richard O. Carlson

ADOPTION OF EDUCATIONAL INNOVATIONS

Center for Advanced Study of Educational Administration. University of Oregon, Eugene, Oregon (1965)

This report includes the results of a series of small studies dealing with factors affecting the adoption of educational innovations, including: (1) social structures influencing rate of adoption; (2) communication patterns affecting adoption; (3) predictors of rate of adoption, and (4) the characteristics of innovations as related to rates of diffusion.

In studying (1) and (2), above, primary emphasis was placed upon the school superintendent with the rationale that he is the focal point of decision-making on innovations. Sociometric analysis among school superintendents revealed that a high rate of simultaneous adoption occurred among first choice sociometric pairs. The number of friendship choices was found to be positively correlated with rate of acceptance of new curriculums. A high relationship also existed between a superintendent's status (professionalism, education, prestige, opinion leadership) and rate of adoption. Superintendents tend to seek advice by going up the status ladder. There was also a tendency to seek advice from advisors who had higher rates of adoption.

Using rate of adoption as the dependent variable, several predictors were statistically significant. A high multiple correlation was encountered. Significant predictors included superintendent characteristics of professionalism, opinion leadership, recency of education, attendance at meetings, realistic awareness of innovative environment, and origin. Pupil expenditure and level of enrollment were also significant predictors.

The rates of innovational diffusion were related to the characteristics of innovations as proposed by Rogers (relative advantage, compatibility, complexity, divisibility, communicability). The relationship stood up for a single case but did not hold for all innovations tested. It was concluded that other factors must be investigated besides the Rogers criteria.

Richard O. Carlson Number 7

BARRIERS TO CHANGE IN PUBLIC SCHOOLS

Change Process in the Public Schools, Richard O. Carlson, et. al., eds., Eugene, Oregon: Center for the Advanced Study of Educational Administration (1964)

There are three barriers to change. The first of these is "the absence of a change agent" - being defined as a person who attempts to influence the adoption decisions in a direction he feels is desirable. The role of change agent must be taken by the local school system through the office of the superintendent. The difficulty is that the superintendent is a central part of the unit in which changes are to be affected. New York is an example of one attempt to improve the change process in schools. The plan consists of three separate and distinct groups, the first generates the ideas which are evaluated by the second and a third group develops and disseminates the change. The extent to which this plan is successful has not yet been determined.

A second barrier to change is "a real knowledge base." It is rare when an educational innovation is backed by solid research. However, the federal government has established educational research centers responsible for research, development and dissemination.

The final barrier to change is "'Domestication' of public schools." This has to do with organization characteristics of schools, specifically the relationship between the school and its clients. In the school-client relation the client must accept the services provided by the school organization. The consequences of the domesticated organization is to restrict the necessity for change, i.e., the domesticated organization is more stable than other organizations and when the environment is stable the need for change is reduced.

One distinctive characteristic of diffusion research is the vast amount of work that has been done. The literature in this area is as "sophisticated" as other areas of scientific study to which educators have given their attention. Most of the work done in the study of the spread of educational practices has been done by the late Paul Mort and his students. Mort contended the school system that was first to adopt an innovation spends more money per child than systems which are slower in innovating. However, more recent findings indicate that there is no relationship between the rate of adoption and pupil expenditure.

Robert Benjamin Carson Number 8

TEACHER PARTICPATION IN DECISION-MAKING IN EDUCATION AND OTHER LOCAL COMMUNITY ACTIVITIES IN THREE OREGON COMMUNITIES

Dissertation Abstract 26 (1965)

This study is an attempt to determine some of the ways in which teachers relate themselves to the community through their participation in educational decision-making and other community affairs. More specifically, it deals with: (1) the extent to which teachers desire to participate in community affairs, including decision-making in education; (2) their perceptions of the extent to which teachers have participated in community affairs; and (3) the extent to which the individual teacher respondent has actually participated in community affairs. The study also compares teacher responses to the perceptions and expectations which three other respondent groups--administrators, school board members, and community leaders--have concerning teacher participation.

Samples of respondents in three Oregon communities were studied and tabulations of the questionnaires received from the various groups produced a number of generalizations concerning teacher participation, among which are the following:

1. Teachers feel that they should be involved in education decision-making to a greater extent than they have been.

2. Personal involvement of teachers in decision-making on a formal level is limited to decisions concerning their own classroom and curriculum matters.

3. Teachers indicate a greater willingness to take more extensive actions in community matters not related to education than they do in community matters related to education.

4. Teachers indicate that it is appropriate for them to participate in the community, in areas outside education, to a greater extent than they want to participate in such matters.

5. In general, all groups perceive the extent to which teachers should participate in educational decisions at a slightly lower level than teachers perceive for themselves. Principals and administrators more nearly agree with teachers as to what their role should be than do school board members and community influentials.

6. All respondent groups indicate appropriate teacher action at a higher level in community matters not related to education than in community matters related to education.

7. All groups of respondents indicate recreation as the most appropriate area, outside education, for active and public teacher participation. Business is seen by all groups as the least appropriate area for participation on the part of teachers.

8. Teachers as a group are perceived as only slightly more effective than teachers as individuals in influencing decisions made in education.

9. Teachers as a group are perceived as no more effective than teachers as individuals in influencing general community decisions.

10. In all three communities, both teachers and knowledgeable and influential respondents perceive top school administrators as the most influential individuals in education.

11. Individual teachers are not perceived by either knowledgeable and influential respondents or by teachers as influential in education or as generally influential.

12. Teachers perceive holders of official positions at a higher level of general influence than do knowledgeable and influential respondents.

13. In the community where school board members come from the individuals perceived by knowledgeable and influential respondents to be generally influential, a higher level of support for education was evidenced than in the communities where board members did not come from this group.

14. Administrators are satisfied that teachers do not participate at a high level in community decision-making. This is also true for other groups. The teachers themselves do not indicate a desire to participate at a level above that considered appropriate by the members of the other respondent groups. A relatively small percentage of each group indicates that full participation on the part of teachers is appropriate in most community matters.

Robert B. Carson, Keith Goldhamman, and Roland J. Pellegrin Number 9

TEACHER PARTICIPATION IN THE COMMUNITY

Eugene, Oregon: University of Oregon, Center for the Advanced Study of Educational Administration, University of Oregon Press (1967)

A survey was conducted of teachers, administrators, superintendents, school board members, and community influentials, with respect to actual participation, and what the desirable participation of teacher should be, in educational activities. Summary results are reported for teachers separately from the others noted above. Comparisons are made between teachers and the remaining individuals who are combined. Teaching experience, sex, and level of teaching are examined as contributors to teachers' responses.

The following are perceived as major findings and generalizations from the survey:

> Formal participation (committee membership for making recommendations or authority to establish policy) is regarded as appropriate by most teachers in (by rank order of consensus), salary scheduling, classroom instructional methods, curriculum planning and development, organization and content of curriculum scheduling in teacher's own room, and selection of instructional supplies.
>
> Teachers perceive themselves, as a group, as having participated formally in areas they deem appropriate for participation (as in the above paragraph). They feel, however, that their major efforts have been limited to the classroom and curriculum when sampled on the basis of personal experience. Also, most teachers report no personal involvement in most activities, especially budgeting, building, planning, supervisory duties and salary schedules.
>
> More women than men teachers are content with minimum participation in educational decisions; full participation is favored by teachers with four to nine years of experience; junior high teachers seem to be the stronger advocates of full participation in several decision areas; high school teachers do not necessarily favor maximum participation.
>
> The administrator/community group see a lesser number of areas as appropriate for teacher participation in decision-making; there is little disposition to grant policy-making prerogatives to teachers except with respect to classroom instruction and scheduling within teachers' own room. Actual participation of teachers is seen in fewer activities than reported by teachers.

Robert B. Carson, Keith Goldhamman, and Roland J. Pellegrin Number 9

TEACHER PARTICIPATION IN THE COMMUNITY

Eugene, Oregon: University of Oregon, Center for the Advanced Study of Educational Administration, University of Oregon Press (1967)

A survey was conducted of teachers, administrators, superintendents, school board members, and community influentials, with respect to actual participation, and what the desirable participation of teacher should be, in educational activities. Summary results are reported for teachers separately from the others noted above. Comparisons are made between teachers and the remaining individuals who are combined. Teaching experience, sex, and level of teaching are examined as contributors to teachers' responses.

The following are perceived as major findings and generalizations from the survey:

> Formal participation (committee membership for making recommendations or authority to establish policy) is regarded as appropriate by most teachers in (by rank order of consensus), salary scheduling, classroom instructional methods, curriculum planning and development, organization and content of curriculum scheduling in teacher's own room, and selection of instructional supplies.
>
> Teachers perceive themselves, as a group, as having participated formally in areas they deem appropriate for participation (as in the above paragraph). They feel, however, that their major efforts have been limited to the classroom and curriculum when sampled on the basis of personal experience. Also, most teachers report no personal involvement in most activities, especially budgeting, building, planning, supervisory duties and salary schedules.
>
> More women than men teachers are content with minimum participation in educational decisions; full participation is favored by teachers with four to nine years of experience; junior high teachers seem to be the stronger advocates of full participation in several decision areas; high school teachers do not necessarily favor maximum participation.
>
> The administrator/community group see a lesser number of areas as appropriate for teacher participation in decision-making; there is little disposition to grant policy-making prerogatives to teachers except with respect to classroom instruction and scheduling within teachers' own room. Actual participation of teachers is seen in fewer activities than reported by teachers.

The investigation concludes generally that teachers have a low aspiration for decision-making and that this is consistent with their lack of involvement beyond the individual classroom. Analogous findings in other studies are discussed and hypothetical reasons for low participation in decisions and policy-making are presented.

Launor F. Carter

Number 10

FROM RESEARCH TO DEVELOPMENT TO USE

Santa Monica System Development Corporation, paper presented at a symposium sponsored by the American Educational Research Association, Phi Delta Kappa, February (1966)

This paper discusses the current interest in problems associated with affecting the transition of research findings through development to utilization. The author cites and discusses at length three studies which are illustrative of problems associated with the "generation of new knowledge" and its "impact on institutions" receiving the information. These studies are then related to the mission of the regional laboratories.

The first study is concerned with the factors affecting military research and development. The purpose of the study was to find factors relevant to procurement of very advanced weapon systems. Six successful systems were studied. It was concluded that:

1. The transition from research to development to use was not a straightforward process.
2. The time lag between the initial discovery of the technology and its application was large.
3. Communication in research and development tended to be informal and largely on a person-to-person basis.
4. Ideas were pushed through to application at the location at which the ideas originate.
5. Strong leadership (the sense of enthusiasm, belief and dedication to the idea being worked on), was essential.
6. Initial funding of many research and development projects was outside of the "normal funding channels."
7. The "local environment" was adaptive, i.e., not based on position in the hierarchy but on expertise, rather than authoritarian.

The second study discussed is a case study of a successful development project with unsuccessful diffusion of the techniques. Factors were examined which seem to have inhibited adoption of techniques and methods which had been demonstrated to be feasible. Despite the success of the project, no other organization is known to have adopted the procedures.

Three techniques were used to study the efficiency of communication of the results of the first study:

1. the report and a special brochure were sent to other training centers
2. a representative visited a sample of agencies to inform them of the project's success
3. a conference and demonstration was held in addition to a discussion of the project

The results indicated that very little change resulted from the written material; somewhat more innovation occurred after the personal visit; and a statistically significant change resulted from participation in the seminar and observation group. Other factors relevant to other fields and disciplines are listed in the paper.

The third study is the "Traveling Seminar and Conference for the Im-Implementation of Educational Innovation," which is discussed in relationship to the agricultural demonstrations program. The major objectives of the seminar were: (1) to conduct a survey of and visitation to school sites with outstanding innovations, (2) to implement and conduct a traveling seminar of some 120 educators to selected innovating school districts in four geographical regions of the U.S., (3) to conduct a conference on the problems of implementing tested innovations, and (4) to perform research related to testing of the field extension concept in education.

Participating schools expressed positive attitudes toward attempting many of the innovations in their own schools. A formal evaluation of the effects of the seminar showed that the participating districts had a higher innovation score than did the nonparticipating districts. A high positive correlation was obtained between two variables, "Highest Teacher Salary" and "Superintendents Ambition."

It was demonstrated that the traveling seminar has the potential of being an effective technique in stimulating adoption of innovations. However, there are necessary conditions which must be met. There must be large support over a geographical area; the innovation to be demonstrated must be credible; the environment of the school district must be receptive to innovation; and a strong leader in the system must be dedicated to the introduction and continuation of innovations.

The role of the regional laboratory is also discussed. The assumption is made that the regional laboratory is not to undertake research *per se* but to facilitate the introduction and demonstration of new techniques. The regional laboratory should be able to arrange for credible demonstrations and to evaluate the innovation to insure its proven usefulness. The regional laboratory should promote the movement of personnel between various organizations, and it would be desirable for it to have discretion in the way funds are to be spent, and it should maintain a high degree of objectivity and independence.

Launor F. Carter Number 11

KNOWLEDGE PRODUCTION AND UTILIZATION IN CONTEMPORARY ORGANIZATIONS

In Conference on Knowledge Production and Utilization in Educational Administration: Role Emergence and Reorganization, Co-sponsored by the University of Oregon and the University Council for Educational Administration, Portland, Oregon, October 22-25 (1967)

Knowledge production and utilization is one of the major concerns facing the intellectual community. A balance must be developed between the money spent on basic and applied research and the utilization of knowledge. Basic research can become a closed system in which new questions are raised without any promising practical utilization of results.

Three major studies of utilization are reviewed, viz., Project Hindsight; a case study of unsuccessful diffusion from a successful development project (Tacoma Project on training the mentally retarded); and the Traveling Seminar (sponsored by System Development Corporation) for the implementation of educational innovation. Brief general results in these projects are presented below:

Project Hindsight - 91% of the contributions to new weapon systems came from technological developments and only 9% from basic science. Most of the technological applications were perceived as direct needs of the new systems rather than derived from spin-offs. On the average, science applications took 9 years and technology took 5 years between discovery and application.

Tacoma Project on Mentally Retarded - This project successfully trained and placed mentally retarded young adults. Several diffusion techniques were tried, e.g., non-technical reports, conferences, visitation by project (Tacoma) personnel to new projects, and psychological consultation. Combinations of these are discussed as the most meaningful methodology for diffusion.

SDC-sponsored Traveling Seminar - 120 educators visited several school systems in which outstanding innovations were being implemented, and a follow-up was made a year later with respect to the innovation which had been stimulated in their home school districts. Experimental and control districts were rated on an innovation scale. Using analysis of covariance to hold initial conditions constant, results were in favor of the participating districts at the .01 level of confidence.

Further general discussion is devoted to limitations to the applications of psychology of learning, the need for social and educational engineering, the danger of seeking simple solutions to complex problems, and the role of gatekeepers (school boards, legislatures, the Secretary of Defense) in the innovation process.

Gordon Cawelti Number 12

INNOVATIVE PRACTICES IN HIGH SCHOOLS: WHO DOES WHAT - AND WHY - AND HOW

Nation's Schools April (1967).

"This national survey of 7,237 accredited high schools discloses, state by state, how many schools have accepted or rejected 27 important innovations." It reflects the status of innovations at the moment of survey, namely, the Fall of 1966. An innovation was broadly defined as "any practice not generally in use in American (U.S.) high schools."

Based upon this interpretation, a large list of innovations was assembled. This was reduced to 27 innovations which met the following arbitrary criteria:

1. Ease of interpretation
2. Variation as to type in order to include curriculum, technological and organizational innovations
3. Appropriateness, i.e., capable of adoption by any school

The adoption rate was about 6 out of 27 innovations, on the average in the reporting high schools. Innovations were distributed almost equally among curriculum, technological, and organizational changes.

The attached chart reflects rates of adoption and abandonment. Rates are according to the percentage of schools which had reacted to the innovations in either way. The highest rates of adoption were associated with Language laboratory (71%); Work-study program (49%); PSSC Physics (43%); Team Teaching (41%); and CHEM study chemistry (39%). Highest rates of abandonment were associated with SMSG Math (6.1%); Honor Study Halls (6%); Programmed Instruction (5%); Team Teaching (4.3%); Television instruction (4%). Rates of abandonment were generally quite low, ranging from 0.06% to 6.1%.

As expected, the large public suburban high school spending more than $650 annually per student tends to be the most adaptable institution.

There were 10 reported projects which appeared to be truly innovative such as differentiated staff, counselors assigned to teachers, involvement in social problems by students, student government, intervisits among schools, slow learner programs, daily demand schedules, sensitivity training, intervention strategies, computer-assisted instruction, and information retrieval devices.

The following list of observations were "supported by the study."

1. The diffusion rate for acceptance of new ideas is more rapid now in secondary schools.
2. Schools vary in their rate of innovations.
3. There is an abundance of material on innovations but little on the effects of treatment or strategies.
4. There are relatively few "authentic inventors" in the school field.
5. A high rate of abandonment of some innovations stresses the need for careful planning and implementation.
6. Apparently, haphazard change in schools leads to uneven national efforts, indicating need to clarify change process, develop goals, develop an evaluation system, and develop a willingness to acknowledge weakness in planning for change.

Rate of Adoption and Abandonment of Innovations

(By percentage of high schools in total sample)

Innovations	Adopted*	Abandoned**
PSSC physics	43 %	3 %
CHEM study chem.	39	1.6
CBA chem.	10	2.7
SMSG math.	36	6.1
UICSM math.	5	1.5
ESCP physical sci.	10	0.3
SSSP physical sci.	3.5	0.1
Humanities	18	1.0
Television inst.	16.5	4.0
Programmed inst.	29	5.0
Teaching machine	13	1.7
Language lab.	71	1.0
EDP equipment	28	0.8
Tel. amplification	5	0.3
Simulation or gaming	15	0.1
Flex. scheduling	14.8	0.8
Team teaching	41	4.3
College credit	28	1.4
Nongraded program	5	0.01
Aides-Parapro's	29	1.3
Honor study halls	23.5	6.0
Work-study prog.	48.7	1.6
Sch'l-within-sch'l	2.7	0.3
Cultural enrich.	31	0.3
Student exchange	37	1.7
Optional attend.	4.0	0.3
Extended year	5.1	0.06

* Adopted and retained on a permanent basis at the time of survey.

** Tried or used but abandoned at time of survey.

Mark Chesler, Richard Schmuck and Ronald Lippitt Number 13

THE PRINCIPAL'S ROLE IN FACILITATING INNOVATION

Theory into Practice, Vol. 2, pp. 269-277, December (1963)

This report substantiates the assumption that the principal is an important influence in promoting classroom innovation. The research dealt primarily with variables leading to the indentification and diffusion and teaching practices promoting subject-matter competence and pupil mental health.

The article lists three factors which are important in initiating innovations: the new practices must help solve problems, the new practices should be adaptable to the teacher's style and that the teacher must feel the school administration will support the change.

High positive correlations were found to exist between the amount of staff inventiveness and (1) the staff's perception of the principal's support of innovative teaching, and (2) the teacher's perception of his colleagues' support.

This research also shows there are two major factors operating in the case of principals who encourage staff inventiveness. The principal must have an accurate perception of the values and skills of his staff, and the staff must be aware of the priority that the principal places on the improvement of classroom teaching.

Principals with innovative staffs were found to be in tune with their teachers' feelings and values about education and were better informed about their informal relationships.

The authors list seven specific suggestions for principals. In addition, they indicate that the principal who publicly supports new classroom practices is more likely to have innovative teachers.

Craig Hugh Currie Number 14

SECONDARY SCHOOL PRINCIPALS' ASSESSMENT OF THE IMPORTANCE OF PERSONAL AND SITUATIONAL FACTORS IN THE ADOPTION OF INNOVATIONS

Dissertation Abstract 27-3A (1966)

The purpose of this study was two-fold: First, to determine the status in Oregon of seven practices advocated by the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School. Coupled with this purpose was an assessment of the relationship between the principal's innovativeness and the influence of such mediating variables as size of school, district classification, percentage of graduates enrolled in higher education and amount spent per child excluding capital outlay and transportation costs.

A questionnaire composed of seven sections, each preceded by a short paragraph describing a particular staff utilization innovation asked the respondent to indicate his use or intended use of the innovation as it applied to his school. The second part of each section asked the respondent to indicate to what extent each statement was or was not a factor in his decision to use or not use the particular innovation described.

The following staff utilization innovations were incorporated: Team Teaching, Flexible Scheduling, Planned Independent Study, Use of Teacher Aides, Class Size Variations and Grouping for Special Purposes, Teaching by Television and Electronically Equipped Language Laboratory.

The questionnaire further requested data descriptive of the mediating variables. Also, the principals were asked to rank positions in order of perceived importance in response to a question concerning the decision to initiate an innovation such as team teaching.

The following conclusions appeared to be valid on the basis of the data analyzed from the 149 useable replies representing a 72.3 per cent return.

1. A negligible influence was found between the annual expenditures per pupil in Oregon high schools and their innovativeness. In fact, a negative relationship was reported for two of the staff utilization practices included in this investigation.

2. The availability of funds was an important factor to the principal's adoption intentions for the staff utilization techniques seemingly requiring an immediate expenditure of money in order to initiate the innovation.

3. High school principals having adopted or planning to adopt selected staff utilization practices identified situational factors such as staff and school board support as being of greatest importance in their decision to adopt innovations such as team teaching.

4. The size of school and district classification showed a greater tendency to adopt staff utilization practices for larger high schools and first class unified school districts.

5. Principals depended heavily upon administrative authority in decision-making. Consequently, the control center of the institution was the administrator.

6. High school principals not planning to adopt selected staff utilization practices identified personal evaluations such as suitability for their type of program, substantiating research, educational soundness and merits of the various techniques as being of greatest importance in their decision not to adopt staff utilization practices.

7. Use of language laboratories was more prevalent than any of the other practices reported in this study. Team teaching variations in class size and use of teacher aides were being favorably considered by the majority of high school principals.

8. Educational television and flexible scheduling were reported as the least likely practices to be adopted.

James Patrick Curtis Number 15

A STUDY OF THE FOCUSED INTERVIEW AS A TECHNIQUE FOR ANALYSING DECISION-MAKING PROCESSES IN EDUCATIONAL ADMINISTRATION (RESEARCH STUDY NO. 1)

Dissertation Abstract 25 (1963)

It was the purpose of this study to appraise the focused interview as an appropriate data-gathering technique to produce the kind of information necessary to answer these questions: Do superintendents use theory in the decision-making process? To what extent do they use theory? Which theories do they use?

Five superintendents in Colorado were selected from a list of "outstanding superintendents" submitted by a panel of qualified judges. The researcher interviewed them, using the focused interview technique. The interview protocols were thematically analyzed to extract the data relevant to the decision-making process. Each thematic response was placed into one of seven predetermined content areas, each of which defined one of the steps in the process of making rational decisions.

To answer the above questions, two different sets of criteria were devised: the first set of criteria was used to determine whether the responses of the superintendents exhibit characteristics which reflect the use of theory in making a decision; the second set was used to determine whether the responses exhibit characteristics which indicate that the focused interview was an appropriate data-gathering technique to answer the above question.

In light of the first set of criteria, the data produced no evidence of the application of theory to decision-making, nor did they indicate an awareness of the value of rational decision-making. In light of the second set of criteria, the technique failed to elicit adequate range, specificity, and depth of answers--the elements which constitute productivity.

The findings, and these alternative explanations of them, have at least implications for theory, research, and practice:

1. If theory is important for decision-making in administration, researchers must focus on the development of appropriate methodology for investigating decision-making processes and the relevance of theory to these processes.

2. Theorists in administration should seek to develop theories which are germane to the problems confronting the practicing administrator.

3. Practitioners must themselves become more consciously aware of the nature of rational decision-making, of those existing theories which have relevance to them, and of the body of behavioral science research which can help them to make more accurate and more rational decisions.

David Wayne Darling Number 16

THE DEVELOPMENT OF A DECISION MAKING MODEL AND THE EMPIRICAL TESTING OF THE MODEL USING SELECTED ELEMENTARY SCHOOL PRINCIPALS IN DECISION MAKING SITUATIONS

Dissertation Abstract 25 (1964)

The purpose of this study was to develop and refine a theory of decision making by elementary school principals. The writer constructed a decision model designed as a part of the theory. Specifically the study asked the following questions: (1) Are there identifiable and classifiable problem situations encountered by elementary principals? (2) Are there identifiable and classifiable premises the principal considers when he encounters a problem situation? (3) Are there identifiable and classifiable skills a principal employs while reacting to a problem situation? (4) Does the principal hold an identifiable position in relation to the hierarchical structure of the public school system, and does this position play a part in the process of decision?

Six elementary principals were selected to participate in the study. The researcher held an initiating conference with each subject who participated. During this conference the study was explained and a visitation schedule was arranged. The initiating conference was followed with a one-day observation visit during which the writer took copious notes about problems that arose and actions taken by the principal. The day was concluded with a one hour conference with the principal. At the conclusion of the conference the writer asked the principal to keep an anecdotal record of problems occurring during the ensuing four school days.

The system used to classify problem situations encountered by elementary principals appeared to be adequate.

The system used to classify responses to problem situations, while of use under the limitations imposed on this study, does not appear adequate for future use as a research tool. Instead, the writer developed an instrument, Instrument I, to be tested and used to gather data on responses to the problem situations.

The final Chapter was devoted to revising the theory in light of the empirical tests. Only two examples of the revision are indicated here.

The theory posited that elementary principals served as intermediaries. Data in this study indicated that the principals did serve as intermediaries but were also the initiators of action on numerous occasions.

The theory posited that intermediary decisions would be handled differently from appellate decisions, and that appellate decisions would be handled differently from creative decisions, and that creative decisions would be handled differently from intermediary decisions. Data concerning the responses to the problem situations supported these differences.

Billie Marvis Doughty
Number 17

SOME FACTORS AFFECTING INNOVATION AS IDENTIFIED IN EDUCATION LITERATURE AND AS PERCEIVED BY SELECTED TEACHERS

Dissertation Abstract 27-9A (1966)

The purpose of this study was to investigage selected factors which influence and facilitate curriculum change. Factors were identified by surveying pertinent literature on change in the field of education and in related areas and by examining selected teachers' perceptions of the elements involved in making significant changes in their teaching-learning situations. The extent to which these teachers' identification of conditions conducive to curricular innovation coincided with information contained in the literature was ascertained.

A questionnaire based on information gained from a survey of the literature was constructed and was used to elicit data about some important factors which authorities consider influential in determining the course of educational change.

The following conclusions are based on the findings of this study:

1. Forces outside a school system exert noticeable influence on educational innovation. More changes appear in areas such as mathematics, science, and foreign languages.

2. Essentially, teachers' perceptions of conditions conducive to educational change are in agreement with conditions described in the literature as facilitating change.

3. The factor considered by teachers to be of greatest importance in successful implementation of any innovation was provision of adequate training, guidance, time, and resources for the teachers involved.

4. Attention to the development of feelings of security and to the creation of satisfactory interpersonal relationships was another area which teachers perceived as important in effecting change.

5. Neither in-service education, supervisory help, nor administrative guidance was perceived by the majority of these teachers as having been of appreciable value in implementing changes.

6. Three strategies of change were analyzed. In each, administrators were perceived as the primary instigators of change; moderate attention was given to planning changes to be made, and some involvement of teachers occurred at this stage.

7. During the implementation of changes, help from any source external to the innovating teacher was generally perceived as either absent or inadequate. Teachers felt their efforts almost entirely determined the success of the innovations.

8. Little objective data were available to assess the educational innovations discussed in this study, and continued use, extension, or rejection of innovations appeared to be determined primarily by decisions based on subjective evidence.

9. Occasionally, teachers' perceptions of events which affected them were at variance with the factual happenings. There appears to be a need for more effective channels of communication between administrators and teaching personnel.

10. Teachers perceived themselves as relatively independent, autonomous, professional individuals who enthusiastically welcomed worthwhile innovations. Yet they seldom instigated changes and welcomed detailed guidelines to be used in making changes.

Robert L. Ebel Number 18

SOME LIMITATIONS OF BASIC RESEARCH IN EDUCATION

A paper presented in AERA Symposium on Basic Applied Research and Public Policy, New York City, February 16, 1967

The thesis is offered that basic research on education can promise very little improvement in the process of education. Basic research is defined as the quantification of verifiable general laws, and the establishment of a system of concepts and relations (nomothetic net) in which all specific propositions are deductible from a few general principles. Applied research is referred to as the collection of data that promise help in the solution of some immediate practical problem. It is recognized, however, that what one man may call basic research another may call it applied.

Three basic reasons are advanced for expecting very little from basic research:

1. Its record of past performance is poor -- the contrast is offered in medicine, chemistry and physics where, if the previous research were to be wiped out, our lives would be altered drastically. Education, however, would continue as usual if several years of research on teacher personnel were to vanish. The best examples of research with impact are applied (reading instruction, teacher attitudes, reliability of grading, studies in honesty, etc.).

2. There are serious basic difficulties that are unlikely to be overcome -- human behavior is complex and is the resultant of many antecedent and concomitant factors. Educational variables (motivation, self-concept, ability, etc.) are global and defy precise definition and exact quantification. Attempts at precision only leads to an enormous number of elements. Human variables are difficult to manipulate, interact complexly, reflect non-linearity of relationship and are frequently discontinuous.

3. The process of education is not a natural phenomenon of the kind that has rewarded scientific study in astronomy, physics, chemistry and biology. Education is a human invention, a cultural institution built by men. It needs to be redesigned but doesn't require scientific study any more than it is required for improving poetry.

It is not denied that scientific study should continue on the psychobiology of learning but such study will contribute little to formal education. Empirical study and the acquisition of knowledge on problem areas is seen as fruitful. Examples presented include: improving self-concept of slum children; effects of pass/fail grading; survey research.

Herbert John Eibler Number 19

A COMPARISON OF THE RELATIONSHIPS BETWEEN CERTAIN ASPECTS OR CHARACTERISTICS OF THE STRUCTURE OF THE HIGH SCHOOL FACULTY AND THE AMOUNT OF CURRICULUM INNOVATION

Dissertation Abstract 26 (1965)

The purpose of this study was to determine if relationships existed between certain characteristics or aspects of the structure of the high school faculty and the amount of curriculum innovation. From a group of twenty-six high schools in the Detroit Metropolitan Area--selected on the basis of faculty size, principal's tenure, accreditation, and student enrollment--five low innovating and five high innovating schools were selected to participate in the investigation. Replies by principals to a State Department of Public Instruction questionnaire were used to differentiate the high and low innovating schools. A questionnaire developed by the author was administered to the faculties to determine the differences between low and high innovating schools. Fourteen characteristics or aspects of the structure of the faculty were incorporated in the questionnaire. They were Contact, Rules-Procedures-Policies, Problems-Routines, Decisions, Planning, Coordination, Change, Administration, Utilization, Communication, Cohesion, Purpose, Morale, and Difficulties. Differences were ascertained by the Chi-square test for significance.

The results indicated high innovating faculties compared to low innovating faculties perceived that: 1) they do not have enough contacts with other faculty and professional personnel; 2) they conform and see eye-to-eye on the rules, procedures, and policies of the school; 3) they were better able to solve more quickly the routine or insignificant problems of the school; 4) they had a greater need for faculty revision of the curriculum.

The results also indicated that low innovating faculties compared to high innovating faculties perceived that: 1) they had more participation in making the rules, procedures, and policies of the school; 2) more curriculum changes had occurred in recent years; 3) the quality of educational leadership was higher; 4) there were many counter points of view; 5) they had developed a greater need for interdependence, a feeling of "we-ness," and wanting to stick together and had showed more support against outside criticism.

In addition faculties of high innovating schools were academically better prepared and showed signs of greater changes in the areas of working with the gifted and in the use of curriculum study committees while faculties of low innovating schools were younger, with less over-all teaching experience and less experience in their present building.

In all other areas of the investigation no significant differences were discovered.

Richard Martin Fawley Number 20

TEACHER FREEDOM TO MAKE INSTRUCTIONAL DECISIONS AND ITS RELATION TO CLASSROOM TECHNIQUES AND STAFF MORALE

Dissertation Abstract 27 - 02A (1966)

Four hundred-forty elementary school teachers in eleven selected Colorado school districts responded to a questionnaire concerning decision-making freedom and scores for the school districts and the thirty-two schools therein were calculated. The four highest and four lowest districts and the highest and lowest schools in each district were selected for further participation.

Ninety-six teachers were randomly selected and their classrooms were visited three times each for thirty minutes per visit. Finally, 194 teachers responded to the morale inventory and the questionnaire assessing desired degree of decision-making freedom. All of the results were computer analyzed using a product-moment correlation program and the following conditions were found.

1. Teachers feel they have a moderate amount of freedom to make instructional decisions, but tend to have the greatest freedom in areas of least importance to instruction and vice-versa.
2. The provisions which are made for individual differences tend to be rather limited.
3. In classroom behavior teachers tend to be friendly, business-like, democratic, and optimistic, but are usually lacking in creativity and imagination.
4. The degree of decision-making freedom by itself is unrelated to provisions made for individual differences and to creative teaching behavior.
5. There is very little variation in the delegation of decision-making freedom among teachers.
6. The degree of decision-making freedom is unrelated to the variation in the delegation of freedom.
7. Generally, teachers have a very positive attitude toward their job and related conditions.
8. Teachers desire more decision-making freedom in a few categories and less freedom in others, but in general they desire little difference from what they already have.

9. Variation in the delegation of decision-making freedom is unrelated to staff morale.

10. As the difference between the perceived degree of freedom and that desired by teachers increases, the level of staff morale decreases.

John C. Flanagan

Number 21

USING RESEARCH AND DEVELOPMENT TO IMPROVE EDUCATION

A paper presented at the 1967 annual meeting of the American Educational Research Association. (Symposium on Basic and Applied Research and Public Policy). February 16, 1967.

This paper makes an appeal for the more efficient use of research funds and more systematic study and careful planning of needed improvements of the educational systems. It is an attempt to be "constructive and responsive to current situations and needs."

The author lists several considerations for establishing policy, priorities, and procedures in planning a program for research and development to improve education. These are "based on 35 years of experience" not on any "special validity or authority."

1. Research planning must be based on a detailed study and analysis of the total educational system and its requirements.
2. Research support must be systematically allocated between basic and applied research--it is a question of establishing priorities for the proportion of available funds to be invested in either type of research.
3. Research proposals must be carefully evaluated in terms of the probable extent of the promised contribution to improvement in education.
4. There is a need for the investigators to define their variables in terms of the basic dimensions of the behavioral sciences.
5. Research should be coordinated and integrated to include our overall understanding of all available knowledge, technology and trends.
6. Attention should be given to the leadership, ingenuity, resourcefulness, and understanding of the research team being supported when resources are being allocated.
7. Consideration should be given to the availability of "a balanced team" utilizing different "points of view and disciplines."
8. The program should be planned to obtain "a balanced emphasis on educational improvement for all roles and types of individuals."
9. Policy in administering research support must be such as to strengthen the research institutions.

10. There needs to be close coordination of research efforts to avoid duplication and achieve full utilization of past findings and experience in planning current research projects and programs.

11. Need to plan for special support of key research personnel so that they can use their training, experience, and insights.

Art Gallaher, Jr. Number 22

DIRECTED CHANGE IN FORMAL ORGANIZATIONS: THE SCHOOL SYSTEM

Change Processes in the Public Schools, Richard O. Carlson, et. al., eds., (Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1964)

This article is written from the viewpoint of an anthropologist. The author examines the nature of change, the "role of advocate," the concept of formal organization, and the potential of the school administrator in the role of advocate.

Discussion of the nature of change outlines two premises which are of particular interest to the anthropologist. The first is that culture is bound to change. In a given situation the "carriers" of culture can define the ideal behavior. The second premise is that parts of a culture are linked to other parts and that understanding is accomplished only through their relationship to each other.

An explanation of a "cultural change cycle" is given in terms of three processes: innovation, dissemination, and integration. In discussion of the acceptance of innovation the model, which is seen as best in this case, is the pragmatic model. This model includes the prestige of the advocate and the dependence on authority, and it is most important to consider the kinds of authority to which innovations are tied. Another crucial variable is the expectation of change, including the capacity for criticism. The author then presents the hypothesis that the better teachers are more likely to accept innovations than are the poorer ones and the more educationally secure members of the client group are more likely to accept innovation.

The discussion of the nature of formal organizations centers around Weber's concept of "legitimation"; however, from the standpoint of directed change, the matter of authority in formal organizations derives its importance from factors other than "legitimation." The formal structure is accompanied by networks of informal relations and unofficial norms. Also, there are patterns of belief and sentiment that are organizationally unprescribed and formal organizations never exist in a social vacuum. The most significant quality of the school as a formal organization is that it is a service organization.

The author suggests that the success of the advocate is related to qualities other than dissatisfaction, although dissatisfaction may or may not be present. It is more important for the advocate to have prestige and/or that members of the "target system" depend upon his authority in matters of change. In reference to the school administrators role and status, the phrase "the man in the middle" is used to characterize his role of maintaning a working relationship with various groups without alienating any of them. In other words, the administrator should not act as advocate but rather the problems of change should rest mainly in the administrator's status and that appropriately society should innovate positions that have as their function the management of educational change.

Francis Raymond Goetz Number 23

INNOVATION AND THE PUBLIC ELEMENTARY SCHOOL PRINCIPAL

Dissertation Abstract 26 (1965)

The purpose of the study was to determine the relationship between thirteen selected variables and the principal's degree of innovativeness in five areas of his responsibility; instruction, organization, pupil and staff relations, business management, and community relations. The variables include (1) mode of operation of the principal (democratic -- less democratic), (2) preparation in research methods, (3) extent of formal education (highest degree earned), (4) attitude toward research and innovation, (5) years as a principal in present building, (6) total years of administrative experience, (7) expenditure per pupil in the district, (8) maximum salary of the principal, (9) extent of dissemination practices in the district, (10) mode of operation of the principal's superiors (democratic--less democratic), (11) attitude of superiors toward research and innovation, (12) size of school enrollment, and (13) socio-economic level of the school community.

"A Survey of Innovations Used in Suburban Detroit Public Elementary Schools" provided innovativeness scores for each principal as well as information about innovations being implemented and discontinued in the school districts of the sample. "The Elementary School Principal's Oppinionnaire and Background Data Schedule" provided personal information about the principal as well as data concerned with the educational milieu in which he functions.

Findings indicated that the innovativeness of the principal is influenced positively in one or more areas of responsibility by variables 4, 9, and 10; and negatively by variables 5 and 6. Variables 1, 2, 3, 7, 8, 11, 12, and 13 seemed not to have a significant relationship. All variables combined accounted for only about 25 percent of the variance.

Principals tend to implement the kind of innovations that do not require system-wide cooperation and that do not require additional funds. They innovate most in the areas of instruction (mean of 1.2 innovations per year), organization (mean = .9), and pupil and staff relations (mean = .6), and very little in the areas of community relations and business management (mean = .1 in both cases).

Principals in this group have a favorable yet realistic attitude toward the professional literature. They believe their superiors are favorably oriented toward research and innovation, that teachers are very competent to participate in research and development activities and that they themselves have authority to implement change. They unanimously agree that the principal should be a leader in the innovation provess but few actually describe themselves as innovators.

John Thomas Greer Number 24

A STUDY OF THE DECISIONS OF FOUR SELECTED HIGH SCHOOL PRINCIPALS

Dissertation Abstract 22 (1961)

The study was planned after an appraisal of the literature revealed that writers conceived of organizational decision-making as an impersonal, consistent process; as an individualized, variable process; or as a subjective process performed in a restrictive environment. Little research evidence was found, however, to support any one of the three views.

Evanston Township High School in Evanston, Illinois was selected for the study of educational decisions because of its unique plan of organization which called for sub-unit principalships. Without comparable subjects, it would have been difficult to gather the data required for an evaluation of the literature.

Twelve decision situations were used in the study to determine the consistency of the decisions. In three of the twelve situations the principals reported making the same decision. In the remaining nine situations they reported different decisions.

Evidence was found which indicated that the organization, represented as the expectations held by the members of the Administrative Council, did affect the decisions the principals reported. In eighty-seven percent of the test situations the principals reported decisions which agreed with what they thought the superintendent and other members of the Administrative Council wanted them to do. The discrepancy between the number of common decisions and the percentage of perceived expectation-reported decision agreements was attributed to a breakdown in the communications between the principals and the other members of the Administrative Council.

Another phase of the study was the determination of the actual expectations held for the principals by members of the faculty. It was found that the sub-groups of the faculty agreed on what they expected the principals to do in less than ten percent of the test situations. This figure helped to explain why the principals had difficulty in agreeing on what was expected of them.

The final phase of the study was concerned with the decisions observed or assumed by members of the faculty. It was found that seventy-seven percent of the decisions reported by the principals had been observed by members of the faculty. It was also found that in more than fifty percent of the test situations the majority of the faculty made incorrect assumptions regarding the decisions made by the principals. The percentage of incorrect assumptions appeared to reflect the variable decision pattern at the decision making level.

The evidence accumulated in the study, therefore, suggested that a useful approach to the study of an actual decision situation should incorporate personal and organizational factors. The approach which placed primary emphasis on personal factors and excluded or made subordinate the constraints of the organization was denied. It was found that the principals did conform to the authority of the superiors. The data also denied the approach which placed primary emphasis on the organization. It was found that, while the principals did conform to the authority of their superiors, their perceptions of the nature of the superiors' expectations limited the stabilizing influence of the organization.

Egon G. Guba Number 25

DEVELOPMENT, DIFFUSION AND EVALUATION

In Conference on Knowledge Production and Utilization In Educational Administration: Role Emergence and Reorganization

Co-sponsored by the University of Oregon and the University Council for Educational Administration, Portland, Oregon, October 22-25 (1967)

This is a very encompassing paper, written by an author who is deeply involved in the whole process of research utilization, innovation, diffusion, etc. Major topics which he covers include:

the gap between knowledge production and utilization;
the need for intervening developmental activities;
the trade-offs between research results and other critical variables in decision processes;
steps in the research process (depict, relate, conceptualize, test);
steps in development (depict, invent, fabricate, test);
invention defined as transmitting, translating, transforming, synthesizing, and creating;
the confusion in defining differences between research and development;
the activities implied in diffusion (tell, show, train, etc.);
the procedures of adoption (install, institutionalize, etc.);
whether we are now bridging the gap between research and practice;
perceived roles for R&D Centers (bridging the gap);
Title III Centers for diffusion, and Title IV Centers for development, and identification of problems;
assumptions which must be considered if diffusion strategies are to be successful;
and finally, an interesting treatment of evaluation which takes it beyond the confines of what it normally means in educational research, i.e., it considers evaluation in the decision process and as a planning function, and presents reasons why traditional evaluation has had such limited utility.

While much of value is discussed with respect to the implementing steps of research and development, research personnel may be interested in the discussion of evaluation. Emergent evaluation is seen as an aid in identifying problems, devising treatments, implementing treatment, and determining the feasibility of treatments. Other kinds of evaluation inputs to the decision process are discussed such as context evaluation, input evaluation, process evaluation, and product evaluation.

Traditional evaluation is limited because it provides only terminal data, provides no information during the test, has the constraints of traditional experimental design, and has limited generalization (sources of variation in the real world are deliberately excluded). Constraints are further discussed which may be unrealistic to the needs of education, e.g., statistical assumption of normality, etc.; design assumptions of random selection; the assumption of the invariance and independence of treatments. Evaluation strategies should be developed which emphasize field rather than laboratory conditions, allow intervention for continuous data collection, and treatment change, and for attending to new emergent variables.

John Ofsthus Hanson Number 26

A DESCRIPTIVE STUDY OF BASIC DATA AND THE EDUCATIONAL INNOVATIONS FOUND IN TWENTY-TWO SELECTED NORTH DAKOTA SMALL SCHOOLS

Dissertation Abstract 27 -6A (1966)

This study was intended to ascertain the extent of educational innovations found in the curricula of twenty-two small schools in North Dakota. The specific innovations studied were: multiple classes, team teaching, school aides, shared services, supervised correspondence courses, modification of facilities, programmed materials, instructional supplies and materials, technological developments, in-service training, non-grading procedures, flexible scheduling, and curricular changes. Basic data were also collected dealing with pupil information, the instructional program, school facilities, and supervisory and administrative practices in each school.

Two groups of eleven schools were used in the study. The experimental group consisted of members of the Upper Midwest Small Schools Project (UMSSP) while the control group was randomly selected from criteria which were common to the experimental group.

The null hypothesis of no significant difference between the UMSSP and control schools was tested through the use of "t" tests, Chi-Square tests, and Mann-Whitney U tests. The alpha level of .10 was selected because this was a preliminary study which was exploratory in nature.

1. The UMSSP schools had implemented significantly more innovations in their curricula than had control schools. Specific areas of significant difference were flexible scheduling and modification of facilities.

2. Innovation areas with the widest participation by both groups of schools were technological developments and correspondence courses. Areas of least participation for both groups included team teaching, school aides, shared services, multiple classes, and non-graded procedures.

3. There was a significant correlation .66, between innovation scores and per pupil costs for the control group and a significant correlation, -.78, between enrollments and annual per pupil costs for the UMSSP schools.

4. The average length of UMSSP class periods, 54 minutes, was significantly different from the average 50 minute class period for the control schools. This was attributed to the UMSSP practice of using a "floating schedule" with longer class periods.

5. UMSSP schools required more credit units for graduation; UMSSP students carried more credits per year; and UMSSP teachers taught more class periods per day than did their counterparts in the control schools.

6. UMSSP schools spent significantly more money for equipment in business education and the natural sciences than did the control schools. In the other equipment areas of industrial arts, homemaking, and vocational agriculture, the mean UMSSP expenditure was consistently higher than it was in the control schools.

7. No significant difference was found between groups in terms of valuations of school districts, general fund mill levies, and per pupil costs.

James B. Heck Number 27

AN ANALYSIS OF CHANGE IN PUBLIC EDUCATION

Columbus, Ohio: The Evaluation Center, College of Education, The Ohio State University (1967).

The change factors studied, i.e., study question, include longitudinal patterns and trends, types of school district, geographic distribution of change, source of funds, source of program ideas, source of the problem which resulted in the decision to develop a new program, subject(s) emphasized in the program, type of students served, grade levels affected, deterring and facilitating factors to the improvement of Ohio education, and the effect, if any, of Sputnik I.

For the purposes of this research, an innovation was described as "a program or practice (in any area of education) which was new to the school where the program was operating -- although not necessarily new to the world of education."

The following represent the conclusions, implications and hypotheses suggested by the study.

1. Cross-sectional studies of educational problems do not provide insight into longitudinal questions.

2. The primary clustering of programs was in urban-suburban areas of the state. It is suggested that larger districts with their greater flexibility of resources are much more likely to establish pilot programs of educational innovation.

3. The primary source of funds for educational change was in the individual local school.

4. The antecedents of change are unknown due to the structure of the questionnaire used in the study.

5. The problems which resulted in the decision to establish a new program were located primarily in the local school setting.

6. The greatest subject matter emphasis identified by the study was in the English language arts.

7. The data indicate that programs of change in the area of instruction gave equal attention to all students in the school, including superior students.

8. The grade level affected most by programs of educational change was grade twelve. However, the trend of educational change tended to reflect a pattern of increasing frequency of programs from K through grade twelve.

9. Deterring and facilitating factors were perceived as influences within the educational system and influences outside the system. The most often selected factor was that of financial support in deterring the improvement of educational programs. The most frequent facilitator was the personal attitudes of the professional staff.

10. The conclusions of this study suggest that: the influence of Sputnik cannot be determined; the pace of change in education cannot be determined; a standard classification scheme for functional areas of innovation would be helpful; and resources outside the individual school district are important to innovation.

The study objectives and their relationship to the outcomes of the study are relatively consistent. First, the logical framework of the study established a comparative analysis between certain selected factors related to change and the functional areas of educational programs. Secondly, the establishment of base-line data provided a comparison for data analysis of future studies. Finally, a comparison was made of the study data with the results of other studies which dealt with the development of change in public education.

This report is designed to be of use to educational researchers for analyzing the content and process of change as it has proceeded in the public schools and to educational leaders for organizing education to facilitate the change process.

Seven recommendations are proposed:

1. An annual study similar to the present one be instituted.

2. Future studies should reflect changes which will occur, as well as those which have already occurred.

3. New studies should identify more accurately the larger geographical areas impinging on the school district.

4. Future study would clarify the impact of federal support.

5. Studies should identify the antecedents of innovative ideas.

6. New studies should identify the local school problem which appears to have initiated new programs.

7. Future studies should clarify relevant subject matter needs.

Appendix A contains the survey questionnaire for district superintendents, appendix B. contains the sample questionnaire material which was sent to the "most knowledgeable" people in the educational programs, and appendix C contains the raw data obtained from the questionnaires.

Louis Edward Holden Number 28

COMMUNICATION AND DECISION-MAKING IN SCHOOL BOARD-SUPERINTENDENT RELATIONS: A CASE STUDY

Dissertation Abstract 21 (1961)

The problem with which this study is concerned is the identification of communication channels and the interrelationship existing between the superintendent of schools, members of the board of education, and certain individuals in the community. The focal point of the study is communication in school policy development.

Material gathered through use of both observation and interview is presented in the form of two case studies.

The following conclusions from the case analysis were drawn:

1. As information passes through the communication network, it tends to move in irregular patterns through selected channels rather than in a progressive and regular geometric pattern because the individuals through which information flows are highly selective in their reception and transmission of information.

2. Family visitation patterns of decision-makers' families showed little evidence of influencing the formulation of educational policy.

3. Board members tend to be selected and supported by local power cliques.

4. Status as a school board member or as a superintendent of schools does not carry with it the assurance of strong influence in educational affairs.

5. A majority of decision-makers may be advised by only a few influentials who are relatively unknown as active leaders in this capacity.

6. There is evidence indicating that a leadership structure operates within the decision-making team. This "super elite" communicated frequently among themselves between board meetings. In each community this group was composed of the superintendent, the board chairman, and one influential board member.

7. Evidence gathered in this research suggests that the social position of individual board members, together with their geographical location in their communities, are factors which influence their participation and involvement in the communication network. This implies a predictable pattern of communication.

8. Decision-makers are able to identify only a very small percentage of the communication channels utilized by other decision-makers in the formulation of educational policy.

9. Great variation was observed between individual members of the decision-making team in their demonstrated ability to perceive the communication network.

10. The perception with which an individual views one area of the communication network may vary greatly in degree of accuracy with the percentage with which the same individual views other areas of the communication network.

11. Evidence suggests that decision-makers who are actively involved in communication between board meetings have a more accurate perspective of the communication network than that held by decision-makers who are less actively engaged in communication.

12. Evidence suggests that decision-makers who are judged to be most influential in school affiars also have the most accurate perception of the communication network.

Harry Herbert Houston   Number 29

AN INQUIRY INTO THE ADMINISTRATIVE PROCESS AS IT RELATES TO DECISION-MAKING

Dissertation Abstract 20 (1959)

The purpose of this study was to examine the problem of decision-making in industry and to relate the findings to the problem of decision-making in centralized and decentralized school units.

Because of the nature of the purpose it was recognized that it would be necessary to study the psychological aspects of human behavior as they are consistent with, and relate to, professional behavior. Therefore, the problem became essentially the identification and classification of the factors that affect centralized and decentralized administration and how they relate to a school unit. The factor most closely examined was that of decision-making.

On the basis of industrial trends and on the assumption that a similarity of administrator-personnel problems exists between industry and education, the major hypothesis proposed was that decentralized administration brings a decision closer to an actual need and thereby betters the organization.

After several hundred articles and research studies were examined a final working bibliography of one hundred twenty-five references revealed the following major findings:

1. Decentralized administration is identified with democratic administration.
2. Professional people need the freedom and autonomy that accompanies decentralized administration.
3. Rigidity within the personality of the individual is a reflection of insecurity.
4. Apathetic autocratic people do not feel free to be creative; they are dependent upon leadership.
5. Strong teachers place above everything else the freedom to plan and experiment.
6. Disagreement within a group increases the range of judgment and the quality of decisions.

7. The quality of decisions increases with decreasing leader domination.

8. The individual must have an identification with the total operation if he is to possess a feeling of accomplishment.

9. Decentralization unto itself does not bring about a homogeneous unit but is affected by the personal relationships of the leader.

10. Through freedom of decision the submissive person develops a new feeling of adequacy.

11. The most outstanding results will be realized if teachers are permitted a high degree of latitude in decisions.

12. Friendly teachers achieve more self-initiating work with their pupils.

13. Satisfaction of the needs of teachers is bound up with the needs of pupils.

14. Leaders make their greatest contributions by permitting free expression of opinion and unity of purpose.

15. The school leader who develops a better school has himself become an improved administrator.

The writer concludes, therefore, on the basis of the research and findings of this study that:

(A) Decentralized administration within a school unit leads to the improvement of teachers, pupils, and administrators, just as it leads to the improvement of industrial decision-making and subsequently to the improvement of the operation.

(B) Decentralized administration brings a decision closer to an actual need and thereby betters the organization.

(C) The greater the teacher variable influencing teacher professionalism, the greater is the need for increased democratic administration.

Darrell James Inabnit Number 30

CHARACTERISTICS OF TEACHER PARTICIPATION IN DECISION-MAKING FUNCTIONS OF PUBLIC-SCHOOL ADMINISTRATION: AN EMPIRICAL INVESTIGATION OF TEACHER PARTICIPATION IN POLICY-MAKING AND RELATED FACTORS IN FOUR ILLINOIS PUBLIC-SCHOOL SYSTEMS

Dissertation Abstract 14, 1976 (1954)

This study investigated empirically correlates and variants of participation as reflected in the participation of teachers in decision-making functions of public-school administration. The subjects were 112 non-rural, public-school teachers in 4 Illinois community-unit districts.

The importance of participation in educational policy-making has been recognized in five emergent emphases in education: (a) the movement for increased democracy in educational administration, (b) the recognition of the significance of the adaptability concept, (c) the emphasis on group dynamics in educational planning, (d) the action-research movement, and (e) the emphasis on citizen cooperation in educational policy-making.

Organization is viewed as a cooperative system of individuals, specialized in operations, requiring coordination and administration. Decision-making is a function of organization, with the executive specializing in decision-making and with the responsibility for decisions an institutionally prescribed function of the executive along with the inherent function of coordination.

Participation is a complex phenomenon involving (a) differences in the organizational environment, (b) differences in characteristics of the individual participants, resulting in (c) differences in patterns of participant behavior, and (d) differences in the behavior of individuals as operatives. These clusters of variables were related in a participation model, and measures of each were obtained for use in the statistical analyses in testing several hypotheses.

It was found that the amount of teacher participation in decision-making was not necessarily related to teacher satisfaction or teacher effectiveness in classroom operation. School systems with the greatest amount of participation were not necessarily those with the highest teacher satisfaction. There was no evidence that activity in participation was of any direct consequence in the quality of the educational program as reflected in the teachers' classroom operation.

An examination of certain relationships between teacher characteristics and teacher participation in administrative decision-making pointed to the complexity of participation and the absence of simple and direct determinants of participant behavior. Gross measures of personality characteristics indicated that some individuals participate differently because of greater need for participation. Characteristics of the professionalization of the teacher, such as amount of formal education, attitudinal adjustment to the profession, or commitment to the system, were not useful in the prediction of the amount of participatory behavior.

Teachers' participation on school problems which are recurring and continuous was characterized by more activity and greater responsibility than was participation on areas labeled "infrequent." In participation in decision-making relative to problems proximate to teacher experience, teachers tended to be more active, to accept more responsibility, to interact more with administrative centers, and to exert more influence than in participation related to problems remote from the teachers' day-to-day activities. The subject matter of decision, as categorized in this study, did not have a statistically significant relationship to the satisfaction an individual teacher experiences relative to his behavior in participation, although significant relationships existed relative to specific problem areas.

In examining certain relationships between organizational variables and teacher behavior in participation and operation it was found that it was not what the teacher did in participation that mattered but it was his perception of the environment for decision-making. Teachers whose professional orientation was in consonance with accepted educational thinking were more satisfied if participating in systems where the responsibility dispersion and administrative behavior in decision-making indicated shared authority. The extent to which teachers perceived that their participation was effective depended upon the structural environment more than upon teacher satisfaction.

John H. Johansen Number 31

AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN TEACHERS' PERCEPTIONS OF AUTHORITATIVE INFLUENCES IN LOCAL CURRICULUM DECISION-MAKING AND CURRICULUM IMPLEMENTATION

Dissertation Abstract 26 (1965)

The major purpose of the study was the investigation of relationships between teachers' perceptions of influential sources and types of authority operative in local curriculum decision-making and curriculum implementation. Sources of authority considered were administrative, classroom teacher, lay citizen, and outside consultant. Types of authority considered were charismatic, democratic, expert, functional, and hierarchical. A secondary purpose was the investigation of the relationship between teacher participation in local curriculum decision-making and curriculum implementation.

Instruments were developed that measured teachers' participation in curriculum making; teachers' perceptions of the influence of administrative, classroom teacher, and outside consultant sources of authority; teachers' perceptions of the influence of charismatic, functional, and hierarchical types of authority; and teachers' implementation of the curriculum.

Significant positive coefficients of correlation were found between teacher participation in the local curriculum decision-making process and implementation (.671) ($P < .01$), and between teachers' perceptions of the authoritative influence of classroom teachers in curriculum decision-making and implementation (.272) ($P < .01$). Significant negative coefficients of correlation were found between teachers' perceptions of the functional type of authoritative influence and implementation (-.374) ($P < .01$), and between teachers' perception of the hierarchical type of authoritative influence and implementation (-.232) ($P < .05$). Significant multiple coefficients of correlation were found between the three sources of authority prediction variables and implementation (.355) ($P < .01$), and between the three types of authority prediction variables and implementation (.489) ($P < .001$).

Richard Hughes Kindsvatter Number 32

THE DYNAMICS OF CHANGE IN MARKING SYSTEMS IN SELECTED INNOVATIVE AND NON-INNOVATIVE HIGH SCHOOLS OF OHIO

Dissertation Abstract 27 - 9A (1966)

Marking systems in high schools have changed relatively little in this century by comparison with other aspects of the curriculum. The purpose of the study was to investigate the dynamics of change in marking practices in secondary schools.

The plan of the study was to compare and contrast high schools that had recently effected a change in their marking systems with those which had not. The differences found between the two groups were used to identify conditions most conducive for change in marking practices. The schools that had made changes provided information about how changes were effected.

The assumption was made by the investigator that change in marking practices is one aspect of educational innovation. Therefore, innovativeness or lack of innovativeness was the key for selecting the study group of 80 public high schools in Ohio, 40 in each category.

The one finding that was overwhelmingly evident in the study was that little or nothing that is unique or creative is being done presently in the area of marking practices. None of the changes reported represented a revolutionary departure from traditional practices. Changes in marking practices were reported in 71 percent of the 66 schools that responded, but in each case the change was of an accommodation or mechanical type. In the entire course of the study, the investigator was unable to detect any evidence of work with marking practices on the theoretical level.

A second finding that was significant for the purposes of this study was the fact that change in marking practices does not follow the same pattern as does innovation generally. Change in marking practices appears to be far more pervasive in secondary schools than are innovations in the areas of curriculum, administration, staff, facilities, or pupil personnel.

Regarding the dynamics of change in marking practices principals were found to be the most important agents of change, while faculty groups or committees had a role only slightly less important. In nearly every case of change in marking practices, either one or both of these agents is involved in both the inception and implementation of change.

Marking practices as orginally conceived consisted simply of advancing the student to the succeeding level of study. The increasing complexity and evolving role of the secondary schools have generated concommitant changes in marking practices. Interestingly, the most recent suggestions for change in marking practices are strikingly similar to the earliest practice.

Two major recommendations resulted from the study. First, every principal should insist that in his school there is a comprehensive statement of the grading policies and procedures. Second, educators should have as a long-range goal the elimination of grading practices in the traditional sense.

Inabell Trueblood Kirby Number 33

AN APPROACH TO DECISION-MAKING

Dissertation Abstract 26, p. 2566-7 (1965)

A theoretical problem, the nature of the decision-making process is examined, drawing on knowledge from related behavioral sciences. A theoretical model is derived, analyzed into its component dimensions, and a series of propositions developed which describe these dimensions and their interaction in the actual decision process.

Although the decision-making process is central to the dynamics of an organization, and the administrator is chiefly concerned with the control of that process, he cannot directly control all decisions. A major facet of his role, however, is the manipulation of the components of the organization, human and otherwise, so that the net result of all decisions made in the organizational setting, which in some way or another influence the future of the organization, is consistent and in a direction harmonious with the goals of the organization.

> The type and strength of a particular decision made by an individual on a particular issue is based on three dimensions of his cognitive structures: (1) the instrumental dimension, his role-complex, (2) the directional dimension, his value structure, and (3) the data dimension, the various concepts, facts, principles, laws, theories, etc., with which he gives meaning to the data in his perceptual field. These three dimensions interact in the context limited by the perceptual field of the individual. The results of all the decisions made by all the individuals in an organization contribute to the future of that organization regardless of whether or not they are official acts.

Drawing on related psychological theory, the various dimensions and the interaction process are analyzed, and the following basic propositions (each supported by subordinate minor propositions) are developed:

The Role Dimension: The role dimension of the decision-making process is made up of interactions between the role expectations of the organization and the needs-dispositions of the individual. The area in which the individuals' perception of his role in the organization coincides with his perception of his own interests becomes his effective role -- the area in which he exerts decision-making power in harmony with the goals of the organization.

The Value Dimension: In an organizational setting, the effectiveness of an individual's decisions in promoting the purposes of the organization is dependent on the degree to which the value systems, his own and the official posture of the organization, are individually effective and compatible.

The Data Dimension: The data and meaning dimension of a decision is defined by the nature and complexity of the cognitive structures which the decision maker brings to the decision situation and the degree to which these can subsume the critical data of the decision content.

The Actual Decision Process: The decision is that dynamic cognitive process which occurs when the three dimensions of the interior cognitive structures of the individual interact with the exterior data in his perceptual field in such a way that the possibility of choice is first recognized and then resolved.

Herbert J. Klausmeier Number 34

PROJECT MODELS: ITS INCEPTION AND RATIONALE

In Occasional Paper No. 3, Project Models: Maximizing Opportunities for Development and Experimentation in Learning in the Schools. Report prepared for U.S. Office of Education by the Research and Development Center for Learning and Re-Education, The University of Wisconsin (1966).

Three main problems have been identified by Project Models. They are the development of instructional systems and procedures for continuous improvement, the translation of knowledge from research into learning theory and the technology of instruction, and development of new models for experimentation and testing.

The rationales of Project Models are: new arrangements are needed to carry out more sophisticated research in school settings so that local school systems can eventually conduct research on their own problems, initiate and evaluate innovation in their own system; there is a need for attracting and keeping more competent teachers; and there is a need to promote long-term research and development activities in cooperation with local schools and colleges.

The functions of a Research and Instructions unit are: the promotion of efficient pupil learning; research, development, innovation and diffusion; development of effective motivational and teaching procedures; and installation and evaluation of promising practices and materials prior to innovation through the system.

The responsibilities of the Learning Specialist are related to all of the R&I unit functions. He should assume leadership in the development and evaluation of instructional programs, coordinate the diagnosis of learning problems, establish and maintain good home-school relations, teach and coordinate activities with the other people concerned with the R&I Unit. Other responsibilities of the specialist are: planning and coordination of research, development of activities of the instructional system, the innovation of materials and procedures in the system and diffusion of information and practices.

Some of the characteristics of the learning specialist which should be considered are his research training, teaching experience, career motivation, leadership capability and ability to maintain effective interaction.

Allen Jay Klingenberg Number 35

A STUDY OF SELECTED ADMINISTRATIVE BEHAVIORS AMONG ADMINISTRATORS FROM INNOVATIVE AND NON-INNOVATIVE PUBLIC SCHOOL DISTRICTS

Dissertation Abstract 27-9A, p. 2788-A (1966)

The purpose of this study was to collect and analyze empirical evidence concerning differences between public school administrators from innovative and non-innovative school districts on selected administrative behavioral dimensions.

The school districts selected from the extreme ends of the innovation scale were chosen on the basis of four educational cost factors. These cost factors were school district: enrollment, utilization of operational mileage, expenditure per pupil, and state equalized evaluation. On the basis of these cost factors the districts in the sample were identified as being innovative or non-innovative and as being high cost factor or low cost factor districts.

The hypotheses in general research forms were: 1. Administrators in innovative school systems will earn a greater number of semester hours beyond the bachelor's degree than those in non-innovative systems.
2. Administrators in innovative school systems will indicate more organizational involvement than those in non-innovative systems.
3. Administrators in innovative school systems will use a greater number of information sources than those in non-innovative systems.
4. Administrators in innovative school systems will have more years of experience as educators than those in non-innovative systems
5. Administrators in innovative school systems will read more professional journals than those in non-innovative systems. 6. Superintendents in innovative school systems will use wider teaching staff involvement when instituting new curriculum practices than those in non-innovative systems. 7. Superintendents in innovative systems will recognize the worth and dignity of their teaching staff members more when instituting new curriculum practices than those in non-innovative systems.

The third hypothesis was supported with a significant Chi-square value at the .05 level. This indicates that administrators from innovative systems use more sources of information for new curriculum practices than those in non-innovative systems. The fourth hypothesis was also supported with a significant Chi-square value at the .05 level. This indicates that administrators from innovative systems have more years experience as educators in general and administrators in particular than those in non-innovative systems.

The sixth hypothesis was supported with a significant Fisher value at the .05 level. This indicated that superintendents from innovative systems use wider teaching staff involvement in curriculum change than those in non-innovative systems. The data indicates this was particularly true at the awareness and decision-making phases of the curriculum change process.

The seventh hypothesis was also supported with a signfiicant Fisher value at the .05 level. This implied that superintendents from innovative systems recognize the worth and dignity of their teaching staff more on the fifteen examined dimensions than those from non-innovative systems. Of the fifteen dimensions examined, it was found that superintendents from innovative systems differed significantly on seven from those in non-innovative systems.

Edward Louis Kutzleb Number 36

A STUDY OF THE EFFECTS OF SELECTED TYPES OF PERSONAL INTERACTION ON DECISION-MAKING IN GROUPS OF VARYING SIZES

Dissertation Abstract 24 (1963)

A comparison was made of decisions reached within groups of three, eight, and fifteen members when three different approaches to the decision-making process were used. Specifically, these approaches were (1) decisions reached individually in the absence of communication among the members (nominal group procedure), (2) decisions reached individually following a discussion of the problem (discussion group procedure), (3) decisions reached by a consensus of the members following a discussion of the problem (real group procedure).

The comparative rationality of decisions reached by these procedures with individual decisions reached within groups evaluated by two dimentions of Simon's decision-making model; i.e., (1) the number of alternatives, (2) the number of probable consequences produced by each.

The findings indicated that members in groups of three depending on the real procedure for decisions were as effective in the perception of rational decisions as were three persons working individually toward the solutions to the problems.

A comparison of the relative differences found among the procedures in small groups with the significant differences reported among larger groups also indicated that a real difference existed between the quality of decisions reached in small and large groups.

The opinions expressed by the educational administrators who participated in these studies (seventy-eight in all) selected either the real group or the discussion group procedure as the best approach to rational decision-making because of democratic characteristics associated with these approaches.

Contrary to these opinions, the results reported in this study appear to support the conclusions that group discussion, or decisions reached by consensus, tend to inhibit the creativity of the participants in groups of all sizes, resulting in a corresponding decrease in the quality of decisions produced. The inhibiting factor was not found to be statistically signficant at the 5 percent level among small groups. As the group was increased in size, the inhibiting factor increased proportionately.

Philip Lewis Number 37

EMERGING TECHNOLOGY AND INSTRUCTIONAL SYSTEMS

The National Elementary Principal, vol. 43 September (1963), pp. 34-52

Lewis briefly reviews some selected educational technologies and attempts to "formulate a framework within which to view developments to assist in proper implementation within the total program of education."

He has listed four steps in preparing a "conventional" lesson and three channels of communication which need to be integrated in order to facilitate an effective learning process. He discusses some new developments in publishing instructional materials and their impact on the physical environment. The author also states that the "optimum use of technology in the elementary school involves the consideration of tools, materials, and facilities as a part of the total program of instruction." He indicates that technologies must be justified within the total program before they are included -- the program is important, not the technology.

Lewis also indicates several "trends"(present capabilities) associated with the dual coaxial television cable in schools.

Some projects in eudcational technology are cited and discussed, including: The "satellite" language laboratory at Ann Arbor High School (Michigan), a project in programmed learning at the Roslyn Reading Center (New York), The Edex Teaching System (California), computer research in education, System Development Corporation, (California), and both educational and closed circuit television.

The article suggests an inventory of recent or near future educational developments or advances in technology but gives no indication of the process or method for implementation of these technologies into a school system or an educational program.

Donald Victor MacDonald Number 38

A STUDY OF A COMMUNITY TO DETERMINE PATTERNS OF DECISIONS ON SELECTED CONTROVERSIAL ISSUES IN THE PUBLIC SCHOOL

Dissertation Abstract 16, p. 896 (1956)

This is a study of public opinion on selected controversial issues in the public school.

The over-all purpose of this study is to explore some of the ideas and decisions of citizens in a single community about their public school and to test the usefulness of the instrument used in bringing the people closer to the decision-making which affects the operation of the school.

A secondary purpose is to determine the patterns of decisions made by the people about certain controversial school issues and how these compare with the decisions of the Board of Education and staff.

A final purpose is to determine how well the people will respond to an opportunity to participate in the making of decisions affecting their school.

The following controversial issues were studied and they appear on the schedule as propositions:

1. Teachers should be permitted to spank children to maintain discipline.
2. The Regents Examinations should be continued in the school.
3. Elementary classes should not be larger than thirty pupils.
4. Lansing Central School District should build another school building to accommodate its increased enrollment.
5. The school should employ a Reading Specialist.
6. More courses and services should be offered to pupils.
7. Every child should be promoted every year while in the elementary grades.
8. The school should offer a program in Adult Education.
9. Pupils should have more homework.

The data for the study were obtained from a rural-industrial area in Central New York State, and the following null hypotheses tested: there is no significant difference between people with varying characteristics in the decisions they make relative to the nine propositions investigated in this study. These varying characteristics are as follows:

1. Between men and women
2. Between parents and non-parents
3. Between people of various age levels
4. Between people of various incomes
5. Between people of various educational attainments
6. Between people with children in various grades in the school
7. Between teachers and the residents of the district

The chi square statistical technique was used to test these null hypotheses and a level of significance accepted at the .05 level.

Background factors of age and education seemed to be the only factors which discriminated with any consistency. For the age factor, significant chi squares were obtained for propositions 1, 2, 4, 8 and 9. For education, significant chi squares were obtained for propositions 4, 5 and 8.

The following general conclusions seem defensible:

1. Background factors such as sex, parental responsibility, income, and grade level of children do not have much effect on the decisions which people make about their public school.
2. Background factors such as age and education have some effect on the decisions which people make about the public school.
3. The instrument used in this study is a useful tool for measuring public opinion on educational matters.
4. The public seems to welcome an opportunity to submit their fundamental beliefs on matters related to the public school.

Mack Edision McLeod Number 39

DOMAIN FOR DECISION: THE DEVELOPMENT AND TESTING OF A RATIONALE FOR THE ALLOCATION OF PROBLEMS FOR DECISION

Dissertation Abstract 26, p. 2018-9 (1965)

Decision-making theory was used as a basis for the development of a rationale for the allocation of problems for decision. This rationale was presented as a taxonomy composed of principles or criteria for the organizational allocation of problems to hierarchical positions for decision.

Employing the taxonomy as a guide, a technique was developed for studying the organizational structure of a specific portion of a particular kind of organization -- the elementary principalship of a public school system. The technique entailed the construction of a vignette instrument, composed of eighty simulated problem situations, for administration to selected elementary principals of the school systems studied.

As a test of the technique of study and a partial test of the taxonomy, an empirical comparative study of the organizational structure of the elementary principalship of two large Texas city school systems was undertaken. A total of twenty-five dependent variables was considered in the study. In addition to the comparison made on the basis of the principal's organizational membership, a comparison was made between groups formed on the basis of sex. Also, intercorrelations among the twenty-five variables were calculated, using combined data for all principals.

The analyses of data for groups on the basis of organizational membership revealed significant differences between the groups for six of the variables. Five of these variables were scores from the vignette instrument.

The analyses of data for groups on the basis of sex revealed significant differences between the groups for five of the personal variables -- those relating to the age, preparation, and experience of the principals. No significant differences between groups were found for any of the vignette instrument scores. A bias favoring the promotion of men to the elementary principalship seemed to be revealed by the evidence. Approximately one-third of the twenty-five variables were found to be significantly intercorrelated.

The findings from the empirical study supported a conclusion that the vignette approach to the study of organizational structure was a feasible and useful technique. Also, additional evidence was contributed toward supporting the validity of the taxonomy.

The reported principles for the allocation of problems for decision appear to have very general if not universal applicability to all kinds of organizations. The vignette instrument used in this study was developed specifically to test the technique of study and the taxonomy. Some revisions are in order before it is applied to a broader study of the elementary principalship.

Matthew B. Miles Number 40

PLANNED CHANGE AND ORGANIZATIONAL HEALTH: FIGURE AND GROUND

Change Process in the Public Schools, Richard O. Carlson, et. al., eds., Eugene, Ore.: Center for the Advanced Study of Educational Administration (1964)

Most of this paper is "frankly speculative" ... and an important often over-looked notion is that "any particular planned change effort is deeply conditioned by the state of the system ..." Specific change has typically been in "figure" while the organization or "ground" has been relatively ignored. More specifically stated, "If you will examine the literature on the diffusion of innovations ... you will notice that a good deal of attention is paid to the individual innovator, to when he adopts the innovation, and why. But the literature remains nearly silent on the organizational setting in which the innovation takes place."

The primary target of the author is the improvement of "organization health" or the school system's ability ... to develop and grow into a more fully-functioning system. The focus of attention needs to be shifted from the "great man" approach to innovation to organizational dynamics or "It seems likely that the state of health of an educational organization can tell more about the probable success of any particular change effort."

"Organization Health" is discussed relative to a set of "second-order" system properties. The first three dimensions deal with: organizational goals, the transmission of messages, and the way in which decisions are made. The second group of dimensions deal with the internal state of the system, and its inhabitants' "maintenance" needs The final group include: the notions of innovativeness, autonomy, adaptation vis-á-vis the environment, and problem solving.

The educational systems have special properties which condition the propositions of organization theory in predictable ways. These properties are: goal ambiguity, input variability, role performance invisibility, low interdependence, vulnerability, lay-professional control problems, and low technological investment.

The author then describes six interventions which are aimed at improving organization health. It is not known, according to the writer, which dimensions of "health" are influenced by a particular intervention. However, the interventions are listed as: team teaching, survey feedback, role workshop, target setting and support activities, organizational diagnosis and problem solving, and organizational experiment. There are some common themes among these interventions such as: self-study, relational emphasis, increased data flow, norms as a change target, temporary-system appraoch, and expert facilitation.

Albert Frank Moritz Number 41

THE RELATIONSHIP OF EDUCATIONAL ADMINISTRATION TO DECISION-MAKING IN SCIENCE EDUCATION

Dissertation Abstract 26 (1965)

Decisions are made by all members of the educational organization. This study was made to ascertain the levels of responsibility that are operative in the making of decisions in science education and to isolate those factors which influence their making. For this purpose four basic levels of administrative responsibiltiy for decision-making in science education were established and eight factors influencing decisions were listed. The four levels of administrative responsibility are the administrative level which is concerned with the operation of the total school system, the attendance level which is concerned with the operation of the single building within the system, the department head level which is concerned with the operation of the science department within the school, and the classroom level which is concerned with the operation of the individual science class. The eight factors influencing decisions are legality, policy, operation, personnel, finance, community mores, curriculum, and safety.

It was found that there are areas of agreement and disagreement between administrators and science teachers. However, administrators and science teachers are in comparatively close agreement about where responsibility for decisions in science education lies. Replies indicate that certain duties of administration are assumed by each of the administrative levels of responsibility. Members of the administrative level of responsibility make decisions concerning policy-making and those items which affect the operation of the total school system. They deal with the community and represent the school at community functions. Members of the attendance level of responsibility make decisions concerning the functioning of the individual school building. They control the activities of the school, student personnel and services, scheduling of classes, use made of instructional personnel and the co-curricular activities of the school. Members of the science department head level of responsibility are important links in the process of decision-making. They are both administrative and instructional in their function. They are relied upon heavily by both administrators and science teachers in decision-making. Members of the classroom level of responsibility take little part in decision-making. They are concerned mainly with problems of instruction.

The curriculum factor is the most important in the majority of areas studied. Other factors assume importance in the various areas investigated.

Marion B. Nelson, Jr. Number 42

AN ANALYSIS OF ADMINISTRATIVE DECISION MAKING THROUGH THE EMPIRICAL TESTING OF A MODEL

Dissertation Abstract 27- 4A (1966)

The problem of this study was to analyze the decision making process of selected superintendents of public schools in Texas through the use of a three-dimensional model. Emphasis was placed on classifying specific decision making problem situations rather than on how these decisions were carried out.

The three-dimensional model used in this study was adapted from the tri-dimensional concept developed by the Cooperative Program in Educational Administration, Middle Atlantic Region. The following classificiation of the functions of public school superintendents used in this study was developed by Livingston and Davis: (1) Improving Educational Opportunity, (2) Interrelationships with the Community, (3) Obtaining and Developing Personnel, and (4) Providing and Maintaining Funds and Facilities. The grouping of problem types was taken from Katz's three-skill approach to the analysis of an administrator's work: (1) Technical Problems, (2) Human Problems, and (3) Conceptual Problems. Griffiths phrased the origin of decision dimension used in this study as (1) Appellate Decisions, (2) Creative Decisions, and (3) Intermediary Decisions. All superintendents in school systems of 1,500 to 50,000 pupils in the four Metropolitan areas of Texas also complete a couplet questionnaire in which each of twenty duties was paired against every other duty.

From these superintendents six were selected for detailed. personal observation on the job to gather decision making problem situations. Each of the six superintendents kept an anecdotal record of problems encountered during the next four days following the first observational visit These problems were classified by using the three-dimensional model. Tabulations were made by (1) Function, (2) Problem Type. and (3) Origin of Decision.

The data yielded information from which the following conclusions were drawn:

1. All decision making situations encountered by school superintendents can be classified according to function, problem type, and origin of decision.

2. Superintendents and school board members in Texas hold a similar concept of the duties which school superintendents should perform.

3. There is a difference in the duties considered "of utmost importance" by school boards and those duties to which the superintendents allot the greatest amount of their time.

4. Problems most often encountered by superintendents are in the area of Funds and Facilities, are technical in nature, and are appellate in origin.

William Clarke Newberry Number 43

THE ELEMENTARY PRINCIPAL'S INFLUENCE AND DECISION-MAKING ROLE

Dissertation Abstract 27 - 7A (1966)

This study dealt with the perceptions of superintendents, principals, and teachers regarding the elementary principal's role of influence and decision-making in four categories of administrative tasks. The perceptions of the influence and decision-making role of the elementary principal were also related to the organizational climate of the schools. Purposes of the study were:

1) To investigate the role of the elementary principal as a decision-maker.

2) To investigate the role of the elementary principal as who influences the decisions of others within the organizational structure of a school system.

3) To investigate the relationship of the elementary principal's role of influence and decision-making to the dimensions of organizational climate of schools.

The study attempted to find answers to seven questions:

1) What is the decision domain allocated to elementary principals at three operational levels of school organization?

2) What decision-making influence is allocated to elementary principals at three operational levels of school organization?

3) Are there differences between the decision domain and influence allocated to elementary principals by superintendents, principals themselves and teachers?

4) Does the size of a school system have a relationship to the elementary principal's role of influence and decision-making?

5) Do principals and teachers agree in their perceptions of the organizational climate of schools?

6) Is there a relationship between the decision domain allocated to an elementary principal and the dimensions of organizational climate of his school?

7) Is there a relationship between the decision-making influence attributed to an elementary principal and the dimensions of organizational climate of his school?

The findings of the study revealed at least partial answers to the questions that initiated the study.

1) There were differences in the perceptions of the elementary principal's domain of decision and influence as perceived by superintendents, principals themselves, and teachers. The differences were significant in several administrative task areas and definite tendences toward significance were found in other areas.

2) When ranked in order from one through four in accordance with the decision and influence domain allocated to elementary principals (by superintendents, principals themselves, and teachers) the four administrative task areas were consistently ranked the same by superintendents, principals themselves, and teachers.

3) The size of school systems, as sampled by the study, had little effect on the decision and influence domain allocated to elementary principals.

4) Elementary school principals and teachers perceived three of the eight dimensions or organizational climate with significant agreement. The three dimensions were "hindrance," "esprit," and "thrust."

5) There were a number of significant relationships between the dimensions of organizational climate as perceived by elementary principals and teachers, and the decision and influence domain allocated to principals by teachers and principals themselves.

Roland J. Pellegrin Number 44

AN ANALYSIS OF SOURCES AND PROCESSES OF INNOVATION IN EDUCATION

Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon. Paper presented at Conference of Educational Change, Sponsored by Demonstration Project for Gifted Youth and the U.S. Office of Education, Allerton Park, Illinois, February 28, (1966)

This paper presents an analysis of sources and processes of innovation in education. It examines the following:

The teacher's role in innovation is surrounded more by myth than reality. The role expectation is that she will be creative but studies find consistently that teachers are not major innovators. A lack of institutionalized procedures exist at the classroom level for disseminating information on innovative effort. The norms of teacher professionalism are often at odds with the requirements of bureaucratic structure. The principal is expected to encourage innovation but plays a more strategic role as a link between the teacher and the superintendent. The superintendent is viewed as the key figure in the innovation process at the local level. School boards and the lay public do not influence innovation but act frequently as brakes upon it.

Colleges and universities have little influence on innovation at the local level. State departments of education play a very modest role. The USOE has assumed a vital and increasing role. The role of the NSF and scientists and mathematicians has been very great. Other academic specialists will follow the pattern of science and mathematics.

External change creates resistance, especially if it is not introduced through institutionalized channels; it occurs more frequently in material aspects of the culture; change frequently emerges from marginal groups.

Creative organizations are those which encourage ideas and contact with outside sources, encourage evaluation of ideas, reward on basis of merit, decentralize, expect to take chances, permit fun, allow freedom in choosing problems, and separate production from creative activities.

Many inventions remain invisible and undocumented. Adopting practices from another source is looked down upon. A professional network of communicators and change-agents is lacking. Teachers inhibit each other from trying innovations. A lack of creative working relations exists between educational specialists and other behavioral scientists. Confusion exists on the sources of reliable and valid knowledge. Opportunity is lacking for introducing innovations on an experimental basis. Training programs in education lack specialization, especially for the research task. Educators interact with only a small fraction of the total community.

We have over-simplified the process stages and role behaviors that are necessary to bridge the gap between research and practice. There must be institutionalism of innovative activities -- a substantial number of role specializations need to be established for discovery, translation, experimentation, diffusion, etc. New graduate programs must be developed to train specialists. Linkages and connections will have to be established among specialists in new roles. Conflicting demands between professionalism and bureaucracy must be reconciled.

Dorothy M. Perry

Number 45

PATTERNS OF SELECTED INNOVATIONS IN DETROIT ELEMENTARY SCHOOLS 1895-1945

Dissertation Abstract 12, 845 (1952)

This study deals with the measurement of adaptability in school systems.

Underlying assumptions include the following: adaptability is capable of measurement in terms of the progress of selected innovations toward ninety percent diffusion within a school system; adaptability is a desirable characteristic; adaptability may be improved.

The major purpose of this dissertation is to provide the research necessary to the invention of better and more efficient tools of evaluation of innovations in pursuit of greater and more sensitive adaptability within the social framework.

The major hypothesis involved in improving adaptability is that certain modifying factors act upon an innovation and that these may be changed. To test this hypothesis, fifteen samples of innovations were selected by research methods which included (a) a historical survey of all innovations by reference to primary source material, (b) corroboration by questionnaires and correspondence, (c) inspection of Detroit Board of Education files, (d) interviews with school personnel and (e) screening by cooperative administrators.

The study is based upon histories of the fiteen innovations as they were introduced into the Detroit system and diffused through it.

The fifteen samples selected were:

1. A Public Relations Program.
2. Program for Selection of Teachers.
3. Introduction of a Department of Educational Research.
4. Parents Clubs.
5. Placement of Exceptional Children.
6. Visiting Teacher Program.
7. Lunch Program.

8. Nursery Schools.
9. Conference Period.
10. Manuscript Writing.
11. Conservation Education.
12. Summer Schools.
13. Citizenship Training.
14. Platoon System.
15. Safety Education.

The fifteen innovations in the Detroit Elementary School System were of three different types, i.e. (1) practices resulting from administrative consideration, (2) practices arising from agencies, specialized devices, and services for the individual development of the child in his uniqueness, (3) educative practices directly affecting the curriculum. They were selected from two hundred fifty-one major inventions. Histories of the fifteen innovations were presented and then charted chronologically.

The synthesis, after inspection of the innovations indicates the extent to which the field of introduction influences the spread of new ideas, which agents provocateurs act upon rapid diffusion, to what extent the spread of a new idea is influenced by economic considerations, which social pressures induce change, what aids and obstacles are extant, and which levels demand intensive study.

Among the conclusions reached are the following: the Detroit School System is more adaptable than the Pennsylvania Communities studied by Dr. Mort as determined on his Time Scale; national catastrophe modifies the progress of all innovations; there is high correlation between the diffusion of innovations and the funds provided for them; the majority of changes are precipitated by administrative bodies; external social pressures induce inventions; and many forms of assistance and obstruction exist.

Some of these facts are capable of modification, therefore considering the total goal of universal education in a democracy, there is need to devise a better method for inducing the reception and diffusion of inventions considered desirable.

Robert LeRoy Poe Number 46

THE CONSTRUCTION OF A MATHEMATICAL MODEL OF EDUCATIONAL ADMINISTRATION DECISION-MAKING

Dissertation Abstract 25 (1963)

This study is concerned with the development of a mathematical model of educational administrative decision-making. The mathematical model is developed on a postulational basis with the characterization of administration decision-making logically deduced from the postulates. Organization, organizational activities, and organizational objectives, the undefined terms of the postulates, are later interpreted so the model characterizes educational administration decision-making. The model is designed to determine the effectiveness of organizational activities, administrative decisions, and administration. Methods are presented by which the effectiveness of these quantities may be determined. The model is especially designed to work with qualitative organizational objectives.

The following are the results of the study:

1. The effectiveness of the organization's administration is equivalent to (a) the effectiveness of the administrative decisions which develop, direct, and control and actions which develop, direct, and control the activities of the formal structure of the organization and (b) the effectiveness of the activities of the organization.

2. The effectiveness of the organizational administration is a function of (a) the combination of all the structural units of the organization together with their inter-organizational relationships, (b) the concordance of the formal structure with the informal structure, (c) the number of control actions required to assure that the activities of the organization correspond with high level administrative decisions, (d) the effectiveness of internal communications of the organization, and (e) the perception of the administrators of the organization.

3. The effectiveness of a proposed organizational activity may be predicted by multiplying the probability of the proposed organizational activity achieving an organizational objective by the degree of importance attached to attaining the objective. If the organization is trying to achieve more than one objective then the effectiveness of a proposed organizational activity is predicted by the sum of the products obtained by multiplying the probability of the proposed activity achieving each objective by the importance of each objective.

4. The effectiveness of a proposed organizational activity may be calculated even though the objectives of the organization cannot be measured quantitatively.

5. The effectiveness of individual administrators may be measured.

6. The model provides the means by which a graphic description of the relative evaluation of two or more administrators by organizational objectives may be formed.

Elvin Ira Rasof Number 47

AN APPROACH TO OPTIMAL DECISION-MAKING IN SELECTED AREAS OF EDUCATION

Dissertation Abstract 26 (1965)

Recognizing the need to acquaint educators with the process of optimal decision-making, this study has presented selected approaches to optimal decision-making in certain types of problem areas in education.

First, in order to delimit the area involved in educational decision-making, all types of problems concerned with a "what to do" approach were deleted, leaving only problems concerned with the theoretical character or nature of some situation. These problems were sorted into three categories as suggested by mathematical theory: (1) decision-making under certainty, (2) decision-making under risk, and (3) decision-making under uncertainty.

Within each category, techniques of optimization were presented as follows:

Decision-Making under Certainty
   Dominance
   Hungarian Assignment
   Linear Programming

Decision-Making under Risk
   Standard Gamble
   Mathematical Expectation
   Actuarial

Decision-Making under Uncertainty
   Principles of Choice
   Theory of Games

Throughout the study, emphasis was placed on demonstrating the feasibility of deriving optimal solutions for certain types of problems. Assuming that the ability to derive such solutions will extend the decision-making capabilities of the modern educator, then the next step will be that of further investigation of decision-making techniques not covered in the present study effort.

Kenneth Herbert Reinke Number 48

AUTHORITY STRUCTURE AND DECISION-MAKING IN SCHOOL SYSTEMS

Dissertation Abstract 25 (1964)

The purpose of the study was to determine empirically the interrelationships that may exist in school systems among authority structure, centralization of decision-making, and agreement of staff perception of decision points. Specifically, the following hypotheses were tested: In school systems there is no relationship between (1) authority structure and centralization of decision-making, (2) authority structure and agreement of staff perceptions of decision points and (3) centralization of decision-making and agreement of staff perceptions of decision points.

In addition, ancillary questions were directed toward analysis of certain other relationships among the variables of authority structure, centralization of decision-making, and agreement of staff perceptions in school systems.

Product-moment correlations and partial correlations were calculated to test the degree of relationships between the variables as a whole and by task areas. Other statistical treatments, such as the range test and the test of the significance of the difference of means, were applied to permit analysis of the ancillary questions.

A significant relationship was found in the school systems of the sample between a flat, broad authority structure and a greater degree of centralization of decision-making. When viewed by task areas, however, no significant relationships were revealed. An examination of the correlation coefficients between agreement of staff perceptions and both authority structure and centralization of decision-making disclosed no significant relationships. When viewed by task areas, significant relationships between authority structure and agreement of perceptions were discovered for the task areas of pupil personnel and business management. A significant negative correlation was found between centralization and agreement for the task area of pupil personnel.

School systems having a business manager position had slightly less centralization of decision-making, a flatter, broader authority structure, and less agreement of staff perceptions of decision points for the task area of business management and for all task areas combined. School systems having a curriculum specialist position did not exhibit as clear a set of relationships for each of the variables, tending to indicate that such positions were not typically in the line of authority.

Authority structure and centralization of decision-making were found to be related when decisions typically made within school systems were considered. The findings tended to indicate, however, that authority structure and centralization of decision-making were independent variables.

Moreover, it was concluded that an individual task area approach to organizational analysis appeared to be more appropriate than a global approach across all task areas.

The rationale, instrumentation, and treatment of the data provide a point of departure for further research regarding relationships between the variables studied. In addition, it permits simultaneous analysis of a number of similar organizations.

Research Report No. 07-01 Number 49

IMPROVEMENT OF INSTRUCTION IN WASHINGTON SCHOOLS, OCTOBER 1962 - OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION, OLYMPIA, WASHINGTON

This report is the result of a questionnaire administered to 191 school districts in the state of Washington during the years of 1958 to 1961. The survey was multi-purpose in nature, seeking to identify the kinds of educational improvements, sources of innovations, size of implementing districts, effects, grade levels and pupils served by the new programs, etc. The total number of the new programs was 976 during the time period of the survey. Major summarized findings are presented below. Inferences may be made from the sources of innovation with respect to whether they were research-oriented.

Nine hundred and seventy-six new programs were initiated during 1958-1961, with 46 percent of them accountable during 1961, or four times as many than initiated during the first year of the survey. Local sources accounted for 37 percent of new ideas; 34 percent came from informal professional contact outside the district or from another school district; only 8 percent of the new ideas were reported as originating directly from colleges or universities; only 4 percent were identified with the State Department of Instruction.

Included in the sample were 38 school districts with 2,000 to 19,999 students. Such districts accounted for 39 percent of all innovations. Only 3 districts were included which had 20,000 or more students. Surprisingly these districts accounted for only 8 percent of all innovations. Heavy emphasis was placed by most districts, regardless of size, on new programs in reading, mathematics, foreign languages, and science. These accounted for 49 percent of all new programs initiated during the four-year survey period.

Grades four through twelve received 79 percent of all new programs, roughly equivalent innovative opportunities having been afforded elementary, junior high, and high schools. Average to above average ability levels seem to have been served, with 83 percent of the innovations extended to these groups. It is reported that the number of new programs was in proportion to the numbers of students at each ability level.

The following characterized the new programs: greater emphasis on new and/or different materials; increasing emphasis on acquisition of skills, attitudes, and concepts; use of visual projectors, sound recorders, TV, and increasing emphasis on programmed learning textbooks; extensive use of textbooks and films; utilization of resource people, consultants and subject matter specialists; less reliance upon lecture as a classroom technique and a favoring, instead, of all other methods in roughly equivalent amounts (discussion, recitations, individual projects, etc.);

generally a shift of over 40 percent in personnel utilization, materials classroom procedures, assignment of responsibilities; an effect of reduction in class size, coupled with greater variation in class size than under traditional educational programs; major sources of financing the new projects were the regular school budget followed by NDEA Title III (66 percent and 13 percent, respectively).

With respect to direct utilization of research results, it may be inferred that it was very low since only 8 percent of the new programs had a university affiliation. The picture is not entirely clear, however, since 34 percent of new ideas come from contacts outside the sampled districts. It is conceivable that some of these may have had a research orientation initially.

Research Report No. 07-09A Number 50

WASHINGTON STATE 1966 INVENTORY OF EDUCATIONAL CHANGE, PART ONE: A LOOK BACK

Olympia: Office of Superintendent of Public Instruction
(April, 1967).

This report includes the results of a questionnaire which was developed to answer the question, "What has become of the innovations reported in 1962?" Interpretation of the results of the questionnaire is difficult since only 295 or 30% of the original 976 projects are reported and the questionnaire is not included in the report.

However, on the basis of the returns some indication of the degree to which change occurred over the four year period can be seen. Of the 295 projects reported on, 85 were dropped, 138 were slightly modified, and 72 were extensively modified. Although the latter accounts for only 24% of the projects, it involved 38% of the students. Those slightly modified account for 47% of the projects and include about 44% of the students.

The most frequent incidence of extensive change occurred in grade level change. A successful program was extended upward, downward, or both. Most of the modifications took place in math, reading, foreign language, or in English-language arts where most of the projects occurred. Although some change trends are indicated or implied, it is not clear at what level the change was initiated, the rationale for dropping or modifying the project is not given, and no mention is made of the decision process used for discontinuing a project.

On the basis of the results of this report, it would seem that the most frequent changes can be anticipated in the subject areas: Math, Reading, English-language arts, Science and foreign languages. Data needs to be obtained from other sources before this information can be of any real benefit for those who are concerned with innovation and the effects of change in the school program.

Research Report No. 07-09B Number 51

WASHINGTON STATE 1966 INVENTORY OF EDUCATIONAL CHANGE, PART TWO: PRELIMINARY REPORT

Olympia, Wash.: Office of Superintendent of Public Instruction
(June, 1967).

This report deals with the results of the questionnaire which was designed to answer the question, "What innovations have you instituted since 1962?" This information was solicited from the district superintendents whose responses were expected to reflect "the most significant practices introduced in your districts in the past four years" involving subject matter change, instructional programs or administrative changes. The questionnaire is not included as a part of the report, which makes interpretation of the results difficult.

There were a total of 594 projects reported with reading development showing a sharp increase over the 1962 report. A table in the report shows the percent of the subject-matter involved in the projects but not the number of new innovations or the specific nature of the project change.

Generally, science, mathematics and foreign language innovation show a decline from the 1962 report, while reading development and English-language arts increased. Substantial increase is also noted in counseling and guidance but as indicated above, any comparative analysis is almost impossible because of the manner in which the data has been presented in the report. In the 1962 report it was found that: New programs were developed to serve all grade levels from kindergarten through community college. However, "the grades most affected were the junior high school, 28.4 percent, and the senior high school, 28 percent." (sic). The grades, which are apparently most affected according to the 1966 figures, are the intermediate grades. The junior and senior high schools seem to be in second place with the greatest gain being in the kindergarten.

Malcolm Richland Number 52

TRAVELING SEMINAR AND CONFERENCE FOR THE IMPLEMENTATION OF EDUCATIONAL INNOVATIONS.

Final report prepared for the United States Office of Education by System Development Corporation, Santa Monica, California (1965)

This report describes an approach for reducing the time lag between the development of new classroom practices and diffusion of proven ideas throughout the Nation's school districts. Under the provisions of the National Defense Education Act, Title VII, a contract was awarded for a study of the effectiveness of "traveling seminars," or field site visits, by educators to schools that were known to be operating successful innovation programs. The purpose of the project was to see whether this technique was an effective dissemination method for shortening the gap between innovation and practice in education.

The principal objectives of the project were to: 1) conduct a survey of, and visitations to, school sites with outstanding innovations; 2) implement and conduct a traveling seminar of some 120 educators to selected innovating school districts in four regions of the United States; 3) conduct a conference on the problems of implementing tested innovations; and 4) perform research related to the testing of the field extension concept in education.

Results of this study include: 1) the traveling seminar and follow-up conference concept is a highly effective dissemination method for stimulating and facilitating educational innovation; 2) there are measurable attributes of school districts related to the innovational behavior of these districts; and 3) the attitude of the local superintendent of schools toward innovation is a significant variable in the introduction of innovations.

Recommendations based on the study results are: 1) the traveling seminar technique should be expanded and actively supported as an effective dissemination activity. 2) the traveling seminar and conference method be considered for incorporation in the dissemination programs of the planned USOE regional laboratories. 3) future traveling seminars should be modified to include the suggestions included in the report. 4) substantial expansion of present limited research efforts should be devoted to planned change in education.

Arnold Roe Number 53

AN ADAPTIVE DECISION STRUCTURE FOR EDUCATIONAL SYSTEMS

Dissertation Abstract 25 (1964)

A systems analytical approach for use in the decision making process in educational systems is made possible by the development of: a utility function which relates system inputs and outputs to a value scale outside of the system; and explicit criterion function; decision rules for achieving the criterion; and a plan for gathering and using data.

The output of an educational system is defined as the sum of the increment in life-cycle productive output attributable to the educational experience of all individuals who have been part of the system. A method is given for estimating the expected increment in the productive output of current students and for relating students' level of performance in school to their expected increment in life-cycle earnings. The expected increment in earnings for each future year is discounted back to the date that a student entered the educational system to give a single present worth of the expected life-cycle earnings. The net output per student is obtained by subtracting the present worth of the total expenditures made in providing the education to a student. The discounting procedure establishes a utility for the amount of time it takes a student to complete an educational experience, which, in conjunction with the performance adjusting factor, makes it possible for the first time to evaluate the trade-off between students' learning time and performance level.

The criterion function suggested for educational system is the sum of the net present worth of the expected increment, in life-cycle earnings of all students who are being, or will be, educated in the system. When there exists precise information for determining the utility of alternative curricula or pedagogies, a simple input-output analysis can be made to determine which of the alternatives maximizes the criterion function.

Decision rules are developed for the cases where: no prior information exists as to the distribution of expected net outputs; the distributions are Gaussian and the costs of making observations on student performance is included in a two-stage sequential assignment procedure; the distributions are Gaussian and a multi-stage sequential assignment procedure is employed. The decision rule for the later procedure was obtained by a numerical backwards-induction technique which should be applicable to non-Gaussian distributions and useful for sequential decision problems outside of the educational context in which it was developed.

Everett M. Rogers   Number 54

WHAT ARE INNOVATORS LIKE?

Change Process in the Public Schools, Richard O. Carlson, et. al., eds., (Eugene Ore.: Center for the Advanced Study of Educational Administration, (1964)

The author maintains that "an understanding (of) the behavior of innovators is essential to a comprehension of the central processes of social change." The purpose of the paper is to "isolate" the characteristics of innovators.

There is an appeal for a standard definition of what an innovator is, and it is suggested that it is very much a matter of timing. The time-span of adoption appears to approximate the normal distribution in cases subject to past research. It also appears that schools change more slowly than farmers, medical doctors or industry.

The author describes innovators as venturesome, i.e., they desire the hazardous, the rash, the avant-garde, and the risky, and they must also have the ability to understand and use complex technical information. Another way of describing the innovator is by a series of generalizations. Innovators:

1. generally are young
2. have relatively high social status, in terms of amount of education, prestige ratings and income
3. consider impersonal and cosmopolite sources of information important
4. are cosmopolite
5. exert opinion leadership
6. are likely to be viewed as deviants by their peers and by themselves

Research findings reported in the paper furnish implications for school administrators.

1. A high relationship has been found between the financial resources of a school system and its innovativeness.
2. The social characteristics, social relationships, and communication behavior of the members of the school staff undoubtedly relate to the innovativeness of their school system.

3. The school system may affect the innovativeness of the teacher.

4. The absence of agents that promote change may be a factor in the relative slowness with which schools adopt innovations.

Innovative school administrators might be expected to maintain close contact with laboratory or experimental schools and with universities through enrollment in graduate work or attendance at conferences and workshops.

David Alan Sands Number 55

THE CONTENT OF DECISIONS MADE AT DIFFERENT HIERARCHICAL LEVELS IN THE ADMINISTRATION OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN TEXAS

Dissertation Abstract 25 (1964)

The central problem of this study was to categorize and classify the content of decisions made at each of several levels of decision-making hierarchy of the Texas educational organization. The study was concerned with the subject matter of written statutes, rules, policies, and standards -- what decisions have been made about -- and with the types of subsequent action for which decisions called.

As a result of categorizing all decisions in terms of the classification system described, it was seen that decisions whose content concerned each of the four general subject areas had been made at each loci of decision making. At none of the decision-making loci, however, were decisions in evidence concerning every one of the fifty-three topics under the four general subject areas. Decisions which called for each of the four types of action provided for by the classification system utilized in the present study were in evidence at all decision-making loci investigated.

Total amounts of decisions were found to vary considerably from one level of decision making to another. Variances in total decisions and relative proportion of decisions, as reflected by percentages of total decisions, were also found to vary widely from one hierarchical level to another and from one subject or one action type to another within each hierarchical level. In come instances it was possible to detect certain apparent patterns of consistency or change between hierarchical levels, subject areas, and types of action for which decisions called. In many other instances, the variation seemed to be contributable to little more than the vagaries of the decision makers at the several loci.

While the great volume of formal decisions made by the several hierarchical levels of the Texas educational organization regarding public education called for an extensive rather than intensive treatment, the study has both theoretical and practical significance. To the extent it provides an initial picture of the content of, and subsequent action called for by, formal decisions made at the various levels of the educational hierarchy; it provides a base line from which other factors bearing upon administrative decision making and upon administrative behavior might be investigated. In addition, the classification system developed for use in this study could also prove useful in subsequent investigations of the content of decisions made in educational organizations. Finally, some value should accrue to the practicing Texas school administrator from the description and classification of formal hierarchical decisions. Perusal of this dissertation could provide him with a somewhat more complete grasp of one set of factors in the total framework in which he operates.

Donald Paul Shock Number 56

PATTERNS IN THE DECISION MAKING PROCESS OF A SCHOOL BOARD

Dissertation Abstract 21 (1960)

The problem undertaken was to identify, if possible, the patterns followed by a school board in making policy decisions, and whether these patterns vary with the nature of the problem. The study was concerned with answering three questions:

1. Is there a pattern by which the subject school board arrives at a decision?

2. Does the pattern vary with the type of problem?

3. How do the patterns used by the subject board relate to the findings of previous studies of school board decision making?

The more important findings and conclusions are:

1. There is a definite pattern followed by the subject school board in reaching its decisions. When all actions regardless of type are considered together, this board followed the pattern of accepting the superintendent's recommendation on 86% of the agenda items. This appears to lend validity to the statement that a school board looks to its superintendent for leadership and guidance in making decisions.

2. There are variations in the primary pattern. These are related to the type of problem, as shown by the Chi-Square Test. The following variations were noted:

    2.1 Building & Properties. The board did not accept the superintendent's recommendation on these items without some question.

    2.2 Personnel. While the board accepted the recommendation without question on matters relating to employment, it questioned the superintendent at length on resignations and dismissals.

    2.3 Curriculum. The board questioned the superintendent intensively on these items and engaged in lengthy discussion and debate.

    2.4 "Add-To" Items. The board tended to question the superintendent and to debate and discuss these items at length. There was a pattern of rejection of the superintendent's recommendation that was not present in any other category.

3. The pattern employed in making decisions on financial matters when compared with the patterns used in deciding curriculum matters appears to be in conflict with some commonly accepted precepts of educational administration.

4. There was little relationship between the patterns of decision making employed by the subject board and the pattern reported in the one other study of school board decision making discovered.

Richard Rollin Short Number 57

ADMINISTRATIVE DECISION-MAKING PROCEDURE AS RELATED TO GOOD SECONDARY SCHOOLS

Dissertation Abstract 23 (1962)

The purpose of this study is to analyze the procedures by which decisions are made relative to the administration of the secondary school and its acceptance as a good school.

In the more outstanding school:

1. The superintendent more effectively fulfilled the functions of the chief administrative officer, and the secondary school principal accepted with confidence responsibility delegated from this officer.
2. The organizational structure involved more personnel but was better understood.
3. The secondary school principal was more often considered the instructional leader, with decisions regarding the instructional program formulated by him or his staff.
4. The secondary school principal had major responsibility for determining financial need in relation to educational goals, controlling student funds, providing information related to general fiscal control, and assuring efficient operation, maintenance, and utilization of facilities.
5. The secondary school principal had a major role in long-range planning and over-all evaluation for the school and was responsible for apprising the superintendent of information which contributed to administrative decisions.
6. Administrators defined dominant leadership roles for themselves and for their co-workers.
7. Administrators mutually held a higher level of personal and professional confidence in one another.

In both the more outstanding and less outstanding secondary school:

8. The principal shared major decision-making responsibility for professional personnel even though the office of the superintendent generally maintained control.
9. The principal had responsibility for determining information about the secondary school which should be disseminated.

10. The principal was responsible for making centrally administered auxiliary services available to personnel of the secondary school.

11. Administrators shared in making decisions regarding the over-all operation of the coordinated school programs.

1. Quality in school operation is more dependent upon the nature in which decision-making responsibilities are shared than it is upon the fact that these responsibilities are shared.

2. The superintendent and secondary school principal of quality schools exhibit essentially the same administrative competencies which include:

   (a) background of experience and training to acquire adequate knowledge for the assignment,

   (b) skill and desire to work cooperatively in planning and executing an educational program,

   (c) ability to organize and synthesize all elements of an educational program and to delegate tasks which are within the realm of his responsibility,

   (d) capacity to be an imaginative and productive leader who directs the program and also inspires others to creative action,

   (e) ability to assemble information and to make timely decisions based upon available facts and his best judgment.

George Bryan Smittle Number 58

A STUDY OF THE PERCEPTIONS OF TEACHER INVOLVEMENT IN CRITICAL AND ROUTINE DECISION IN SELECTED SCHOOLS OF OHIO

Dissertation Abstract 23 (1962)

Authorities in the field of administration have suggested that the administrative process contains the following components: (1) decision-making, (2) programming, (3) stimulating, (4) coordinating, and (5) appraising. This study was concerned with the decision-making component. Answers to the following questions were sought: (1) What is the nature of the decisions that are made in the administration of schools? (2) What do teachers and administrators consider to be the most crucial decisions which they make? (3) What relationship exists between administrators' and teachers' perceptions of the role of teachers in the decision-making process? (4) Are differences of opinion about the teachers' role in decision-making related to such factors as sex, degree, experience, age, salary, building size, system size, position, job satisfaction, satisfaction with administration, and/or satisfaction with decision-making practices? (5) Is it possible to categorize decisions according to types that are meaningful for study and research purposes? Ten hypotheses were stated and tested in an attempt to answer the questions.

An analysis of the response showed that teachers and administrators had significantly different mean critical and/or routine scores on twenty-six of fifty-eight decision-making activities. Both groups were in substantial agreement that the most critical decisions are related to the aims of education in general and to the curricular program in their own communities. Critical decisions were defined as those affecting institutional development. Decisions related to faculty parties and picnics, gift exchanges, duty schedules, teachers' meetings, and room assignments were considered extremely routine.

The second phase of the study was designed to elicit a measure of the "cruciality" of decisions. Crucial was defined in terms of a teacher's desire to help make decisions related to certain activities. Teachers showed little interest in helping make decisions about planning school buildings, making class schedules, spending money, evaluating, screening, promoting, and/or firing certificated personnel and formulating policies related to non-certificated personnel. Administrators agreed that these were not prop areas in which teachers should be involved.

Highest involvement or crucial scores for teachers were found for the categories of instructional materials, pupil conduct, setting goals, grouping, promotion, and grading-reporting practices and faculty parties and picnics. Little relationship was seen to exist between the "criticalness" and "cruciality" of a decision.

Joseph Robert Sproule Number 59

DECISION-MAKING PROCESSES OF BOARDS OF EDUCATION

Dissertation Abstract 26 (1966)

Though much is known about the characteristics of individual board members, studies of the decision-making process of school boards as social groups are especially meager. This study attempted to bridge this gap by developing a body of systematic knowledge about the decision-making processes of boards of education. Since the chief school officer is an integral part of this decision-making process, the study was further intended to examine his specific role in board operations.

The data pointed to some unique patterns of decision-making among boards of education. Decisions in the Status Congruent type boards tend to evolve from the considered opinion of the total body. If sharp disagreement arises on a particular issue, voting is postponed through discussion, tabling, or executive session. This board is greatly involved with curriculum matters. The chief school officer, who is a key figure in the decision-making process, should be well informed in matters of curriculum since he will be expected to render recommendations in this decision area. With slight variations, Residual boards also tend to follow this process.

By contrast, there is the aborted decision-making process of the Factional board which is most highly characterized by the raw power of the majority vote. Sharp differences of opinion are not merged. Most voting is centered upon matters of budget. The chief school officer is expected to be involved in the decision-making. Since the decision-making is segmental, the chief school officer's opinion might well be used as the key to the power vote - that is, the vote which will swing a board member to either side of an issue.

A third pattern of decision-making is most visible because of the tendency for most policies to be formulated almost exclusively by one strong board member. In the Dominated board the chief school officer plays a very subservient role. His discretion is very limited; he is accountable to the acknowledged status leader; and is in practicality a puppet waiting for directions.

A fourth pattern of decision-making is strikingly similar to the third. The basic difference, in the Sanctioning board, is that the exercise of power rests with the chief school officer. If disagreements arise during the decision-making, the matter will be tabled for further study.

Among the more important findings for which this study provides evidence are the following:

1. Four discernible patterns of decision-making tend to be employed by different boards of education as they attempt to reach consensus on common problems - Status Congruent, Factional, Dominated, and Sanctioning.

2. Boards may be classified according to the pattern of decision-making which they employ to achieve consensus.

3. The pattern of decision-making and type of board delimits the amount of discretion available to the chief school officer.

4. Boards appear to be characterized by their tendency to move toward decisions with great or little concern for consensus - that is, the extent to which there is agreement. In some instances, majority vote rules even if it is by the slightest margin. In other instances there appears to be a conscious effort to resolve issues on the basis of unanimity.

5. It seems that a conceptual model similar in format to the one described is appropriate for the analysis of school board decision-making and the accompanying role of the chief school officer.

Daniel L. Stufflebeam Number 60

CATALOG OF EDUCATIONAL CHANGES IN OHIO PUBLIC SCHOOLS

Ohio Educational Innovations Survey, College of Education, The Ohio State University, Columbus, Ohio (1966)

The basic problem underlying the collection of innovations in the state of Ohio is that of linking research with practice. This is a project in which Guba and others are involved. As a preface to the catalog, the current problem is discussed with concern for the stand-off which now exists between researchers and practitioners. Researchers are labeled as theoreticians and practitioners are denounced as short-sighted. (The report is not making these accusations but presents them as observations of the current scene.) The identification of innovations is perceived as one way of determining where joint effort should be placed.

This report is one part of a more broadly conceived program which is intended to explore such relevant areas as the deterrents of change; stratification of school personnel with respect to innovation; sources used for innovation; etc. Also, subsequent reports are intended to cover innovations with respect to scope, quality, innovative characteristics, etc.

The catalog presents change projects in the following areas:

1) instruction

2) administration

3) pupil services

4) school plant

5) staff

6) public relations

7) research

Changes are those which have occurred since 1958. They vary greatly in scope, complexity, research design and rigor of evaluation. The project descriptions as presented do not provide sufficient information for determing rigor of design or degree of research utilization. Future reports in this same program may describe such characteristics.

Lawrence Fred Thomas Number 61

AN ANALYSIS OF THE INSTRUCTIONAL LEADERSHIP OF THE SECONDARY SCHOOL PRINCIPAL IN THE DECISION-MAKING PROCESS

Dissertation Abstract 24 (1963)

The problem under consideration in this study was the determination of the nature of the decision-making process and the instructional leadership of the secondary school principal in that process. The study was undertaken in the theoretical framework of Daniel E. Griffiths' theory of administration which treats decision-making as the central process of administration and proposes six steps in the decision-making process.

The problem was stated in the form of the following three hypotheses: (1) Griffiths' theory of the process of decision-making is valid in applied situations; (2) Secondary school principals typically operate more at the sixth and final step in the decision-making process than at the other five steps; (3) Secondary school teachers express a greater degree of satisfaction with those principals who typically operate more at the sixth step of the decision-making process than at the first five steps.

By an analytic survey of the program innovations in the seven selected high schools the following conclusions were drawn:

1. The first hypothesis, that Griffiths' theory of the process of decision-making is valid in applied situations, was upheld. In each of the seven schools in the study, the principal or members of his staff actively participated in each of the six steps of the process as that school incorporated a particular program innovation into its curriculum.

2. The second hypothesis, that secondary school principals typically operate more at the sixth and final step in the decision-making process than at the other five steps, was upheld. The number of different areas of principal participation varied from school to school, as did the degree of participation in each area, but, the principal in each of the selected high schools did participate actively in the final step of the decision-making process.

3. The third hypothesis, that secondary school teachers express a greater degree of satisfaction with those principals who typically operate more at the sixth step of the decision-making process than at the first five steps, was neither upheld nor denied.

4. Decisions involving instructional program changes in secondary schools were organizational decisions. The decision to incorporate a particular program change into the curriculum was not a unilateral decision, but was made by faculty members and the administration.

5. The secondary school principals exercised instructional leadership through active participation in the decision-making process.

Eugene William Tornow Number 62

A STUDY OF THE RELATIONSHIP OF TEACHERS' PERCEPTIONS OF DECISION POINTS AND THE INTERACTIONS OF THE SUPERINTENDENT OF SCHOOLS, THE DIRECTOR OF INSTRUCTION AND THE HIGH SCHOOL PRINCIPAL

Dissertation Abstract 27 - 3A (1965)

The focus of this study was the possible relationship between congruence of teachers' perceptions of decision points and the interaction behavior of the superintendent, the director of instruction and the high school principal, in large-sized local school systems. Specifically, the study sought to determine if there were relationships between: 1) congruence among high school teachers' perceptions of decision points and the nature of administrators' interactions; 2) congruence in the personal variables of administrators and the administrators' interactions; and 3) congruence in the personal variables of administrators and congruence among teachers' perceptions of decision points.

The rationale stemmed from social systems theory. Expansion of the normative dimension of a social systems model to include expectations for decision making made it possible to relate these expectations to the personal variables of administrators.

On the basis of previous theoretical and empirical work seven major hypotheses were formulated to encourage explorations of the described relationships. One ancillary question inquired into the possibility of significant dyadic relationships.

The Spearman Rank-Difference correlation technique was used to test the major hypotheses and answer the ancillary question.

It was concluded that: 1) school systems varied in the degree to which the perceptions of teachers' as to the loci of decision points were congruent; varied in the nature of interactions among the superintendent, director of instruction and high school principal, and varied in the degree to which the personal variables of the three administrators were congruent; 2) no significant relationship between congruence among teachers' perceptions of decision points within local schools and the nature of administrators' interactions was established; 3) no all inclusive significant relationship between congruence in the personal variables of administrators and the nature of administrators' interaction was established although two significant correlation coefficients were discovered between congruence in certain personal variables and certain measures of interaction of administrators. Three administrators who tended to be alike in the personal variable of socialization, maturity and responsibility tended to be administrators who interacted less frequently than three administrators that tended to be unalike in this personal variable. Members of a triad convergent in the personal variable of intellectual and interest modes tended to be members who spent a great amount of time in interactions; 4) a significant relationship between the degree of congruence in the personal variables of administrators and degree of congruence among teachers' perceptions of decision points was not established, however, two significant correlation coefficients were found between the two variables. Triad members highly congruent in the personal varable of capacity for status tended to be found in school systems in which teachers' perceptions of decision points were highly congruent. Psychological-mindedness was the second personal variable of triad members in which high congruence was associated significantly with high congruence among teachers' perceptions of decision points.

James R. Wailes

Number 63

SCIENCE INNOVATIONS

The National Elementary Principal, Vol. 43, pp. 22-27; September (1963)

This article discusses the use of funds from the NSF to upgrade science teaching. The first two programs to receive NSF support were the Physical Science Study Committee and one dealing with the biological sciences.

Results of the AAAS feasibility study are given in the form of recommendations to be considered in the development of experimental programs and in the planning of materials. In addition, 14 trends are listed.

Two particular problems may arise as a by-product of these trends -- pre-service teacher education and in-service education. Three annotated references are given as an example of one way to assist principals in keeping current on new developments. The objectives, scope, source of funding and where to write for additional information are given for the Elementary School Science Project, University of California, Berkeley; Elementary Science Study, Educational Services, Incorporated; Elementary School Science Project, The University of Illinois. The emphasis in all three projects is on the development of material and their subsequent use in the teaching situation.

William Thomas Ward Number 64

AN ANALYSIS OF THE DECISION-MAKING PROCESS IN AN OREGON HIGH SCHOOL: A CASE STUDY

Dissertation Abstract 20, p. 3170 (1959)

The purpose of this dissertation is to report and interpret that which was observed in an Oregon High School as the teachers and administration met and dealt with three problem situations. The process of solving the problematic situations was observed specifically to identify commonalities existing within the components of the decision-making process, to identify commonalities found in the behavior of the participants as they interacted within the framework of the formal and informal organization during the process of solving the three problem situations, and to identify specific phenomena which have implications for administration and operation of an organization.

The analysis of this research consists of sixteen generalizations derived from the raw data and supported by statements made in the conceptual framework. The decision-making process was seen as consisting of six components, namely, the antecedent conditions, problem identification and definition, promotion of policy alternatives, the enactment of a general rule, the implementation of the decision, and evaluation. Eleven of the generalizations were explicated from the data which dealt with the process of making decisions.

Five generalizations were derived from observations made of the behavior of the participants during the decision-making process. Implications for administration and operation of an organization were drawn from the observations made during the research project.

Walter John Ziegler Number 65

THE BASES AND PROCESS FOR DECISION-MAKING BY THE SUPERINTENDENT OF SCHOOLS

Dissertation Abstract 25, p. 3374 (1964)

Findings. (1) Administrative practices employed by successful superintendents were dependent upon decision-making ability. (2) A policy regarding responsibility for decision-making was considered essential. (3) The major bases for successful decision-making were welfare of children, educational program, community relationships, and staff relationships. (4) The process and time elements for decision-making were considered situational and dependent upon such factors as the complexity of the problem, the personalities, backgrounds, and expectations of the persons involved. (5) The success of a decision was influenced by the process used in making the decision. (6) A decision would be more successful if the people affected were involved in the decision-making process. (7) A planned sequential procedure similar to the scientific method was considered best for solving major problems. (8) The superintendent's council, staff committees, and boards of education were the three major resources and techniques for decision-making. (9) Lay committees, employee organization, P.T.A. groups and consultants were valuable resources for major problems. (10) Group techniques were considered more successful if the group is properly oriented, if several possible solutions are requested, and if disagreements between the superintendent and the group are reconciled early. (11) If reconciliation was impossible, the superintendent should present both his and the group's recommendations along with relevant data. (12) Lay groups affected by a decision were to be informed and consulted, but the decision was considered a responsibility of the board, the administrator, and the staff.

Conclusions. (1) The bases and process for decision-making are situational, and decisions are more successful when situational factors are considered. (2) The process and time elements have important effects upon the success of a decision. (3) A procedure similar to the scientific problem-solving method is usually more successful. (4) The two major bases for decision-making are the welfare of the children and the educational program. (5) The major techniques and resources are the board of education, administrative council, and the school district staff. (6) The group technique develops understanding and expedites acceptance and implementation of the decision. (7) The group technique is more successful if the group knows its functions and limitations, and if the superintendent requests it to recommend several solutions in preferential order. (8) If disagreement between the superintendent and the group cannot be reconciled, the superintendent should present both recommendations to the board, accompanied by supportive data. (9) Decision-making ability is important to the success of the superintendent and is related to significant administrative practices.

INDEX TO ANNOTATED LITERATURE

Index to Annotated Literature

(Numbers are abstract references
not page references)

A

Adaptability, measurement of 45

Adoption 5, 6, 7, 10, 11

    national rates of 12

Abandonment 50

    national rates of 12

Administrative behavior, innovative vs.

    non-innovative schools 35

Administrator, role of 22

Administrator-teacher interaction in

    decision-making 64

Attitudes, sampling technique for 1

Authority 31, 48

    structure 48

    types of, in education 31

B

Barriers to change 7

Behavior and characteristics of innovators 54

C

Change 2, 7, 22, 27

    cultural 22

    factors affecting 17

    strategies for 17

Change agent 7, 32

Communication 6, 28

Communication and learning process 37

Community activities 8

Computer instruction 37

Creative organization, characteristics of 44

Creativity 29, 32, 36

  inhibition of, in groups 36

  lack of, in grading practices 32

  and teacher characteristics 29

Criterion function, systems analysis, for education 53

Criticalness and cruciality, of decisions 58

D

Decision-making, administrative 1, 15, 29, 33, 42, 46, 55, 57, 58

Decision-making (organizational and structural factors) 3, 24, 29, 30, 36, 39, 41, 46, 48, 55, 62

  and authority structure 48

  and centralization 48

  and decentralization 29

  at different hierarchichical levels 55

  group decision-making 3

  and group size 36

  individual vs. group 36

  influencing factors 41

  loci of, in school systems 62

  and organizational structure 24, 30, 39, 46

Decision-making, general 4, 5, 8, 9, 14, 27, 28, 31, 33, 38, 41, 57
    and cognitive structure 33
    and curriculum change 31
    in good secondary schools 57
    public participation 38
    responsibility in science education 41
Decision-making (principals) 39, 43, 61
    characteristics of principals 39
    role of principal 43, 61
Decision-making and school boards 28, 56, 59
Decision-making (superintendents) 65
    perceived critical variables 65
    successful strategies 65
Decision-making (teachers) 8, 9, 20, 30, 58, 64
    teacher-administrator interaction 64
    and teacher characteristics 30
    teacher participation 8, 9, 30, 58
    teachers and staff morale 20
Decision-making (theoretical and mathematical models) 15, 16, 33, 46, 47, 53
    applied theory 15
    mathematical model 46
    optimal applies to education 47
    systems analysis, applied to education 53
    theoretical model 16, 33

Decisions 24, 55, 58
  classification of 55
  content of 55
  cruciality and criticalness of 58
  decision situations 24
Development 2, 10, 21, 25, 34
Diffusion 2, 5, 6, 11, 25, 45
Dissemination 52

E

EDEX system 37
Educational systems, and organizational theory 40
Educational technology 37
Evaluation 25
  limitations to traditional approach 25
  in educational decision process 25

F

Focused interview 15

G

Grading practices, innovative vs. non-innovative schools 32
Group size, and decision-making 36

H

High schools, high innovators 12

I

Innovation (general) 5, 6, 10, 23, 27, 52

Innovation 13, 14, 26, 27, 44, 45, 49, 54, 63

  deterring and facilitating factors 27

  and district characteristics 14, 26, 27, 54

  evaluation of 45

  institutionalization of 44

  processes of 44

  science education 63

  sources of 44, 49

  and staff perception of principal 13

  and teacher role 44

Innovations 12, 13, 26, 27, 49, 50, 51, 60

  characteristics of 13, 49, 50, 51, 60

  compendia 26, 27, 49, 50, 51, 60

  national survey of 12

Innovative vs. non-innovative schools

  administrative behavior 35

  differences in school characteristics 19

Innovators 54

  behaviors 54

  characteristics 54

Instruction 37

Intervention, for improving organizational health 40

J

K

L

Language laboratory 37

Learning process, and channels of communication 37

Learning specialist, research and instruction unit 34

M

Mathematical model, decision-making 46

N

National Science Foundation, educational change 63

O

Ohio State, innovations 27, 60

Optimizing solutions to educational problems 47

Organizations 22, 34, 39, 44, 46
    creative characteristics 44
    effectiveness 46
    formal 22
    networks 22
    new arrangements 34
    and problem allocation 39

Organizational responsibilities 4

Organizational theory and educational systems 40

P

Perceptions 4, 8, 9
    administrators 4
    teachers 4
    of teachers in decision-making 8, 9

Personal characteristics differentiating decisions by public 38

Principal 13, 14, 16, 23, 24, 32, 39, 43, 57, 61
    change agent in grading practices 32
    characteristics and decision-making 39
    expectations of staff 24
    innovation and perception of staff 13
    role in decision-making 16, 43, 61
    role in innovation 13, 14, 23
    role in hierarchy 16
    role in high quality schools 57

Probability sampling 1

Problem allocation for decisions in organizations 39

Problem situations, simulated 39

Project HINDSIGHT 11

Project MODELS 34

Public participation in educational decision-making 57

Q

R

Regional laboratory 10, 25

Research, applied, and education 18

Research, basic, limitations in education 18

Research design 1, 3, 6, 23, 26, 27, 31, 35, 36, 45, 47, 48, 52, 58, 61, 62

Research and instruction unit 34

Research into practice 34

Research, utilization 10, 11

S

Science education 41

  innovation 63

Science, effect upon education 18

School board 28
    decision-making 56, 59
Schools
    characteristics and innovation 19
    differences in innovating levels 19
Schools, high quality 57
    role of principal 57
    role of superintendent 57
SDC, traveling seminar 52
Situations, decision 24
Statistical test 1, 3, 6, 23, 26, 27, 35, 36, 39, 43, 45, 47, 48, 52, 53, 56, 58, 61, 62
Strategies for change 17
Strategies in decision-making, superintendents 65
Superintendent 15, 28
    decision-making 42, 65
    functions 42
    and innovative schools 35
    perception of principal's decision-making 43
    role in high quality schools 57
    strategies in decision-making 65
Systems analysis, applied to education decision-making 53

T

Tacoma Project 11

Teacher 8, 9, 17, 20, 29, 30, 31, 43, 44, 58, 62, 64
    and administrator interaction in decision-making 64
    and curriculum change 17
    and freedom for decision-making 20
    participation in decision-making 8, 9, 30, 58
    personal characteristics and decision-making 30
    personal characteristics and creativity 29
    perception of influential and administrative sources of decision-making 31, 43, 62
    role in innovation 44
Technology, educational 37
Television 37
Traveling seminar, SDC 11, 52

U

V

W

Washington State, innovations 49, 50, 51

X

Y

Z

BIBLIOGRAPHY

All references have been accumulated into this section to form a comprehensive bibliography on the change process in education. Most of the references fall outside the purview of the objective of this study but are pertinent to the problems associated with change. Those references which are also to be found under the preceding section of annotated literature have been identified by an asterisk.

Since the literature does not exactly defy categorization, it has been sorted according to seven areas for purposes of reporting. Inevitably, there is overlap among them, but they include:

- Planning and Organization for Educational Change
- Processes and Strategies for Educational Change
- Change Agents and Roles
- Diffusion
- Adoption
- Decision-Making
- Innovation

BIBLIOGRAPHY

Planning and Organization for Educational Change

Anderson, C. Arnold. Educational Planning in the Context of National Social Policy, Phi Delta Kappan, 47: 180-184; December, 1965.

Bennis, Benne & Chin, The Planning of Change. New York: Holt, Rinehart and Winston, 1961.

*Blanke, Virgil E., Planned Change, Public Education and the State, Ohio State University. A paper presented April 5, 1967 at an eight-state project, "Designing Education for the Future".

Blanke, Virgil E., (issue editor) Planning for Educational Change. Theory Into Practice. Columbus, Ohio: The Ohio State University Vol, V, No. 1, February 1966, pp. 60.

Brickell, Henry M., Organizing New York State for Educational Change. Albany: New York State Education Department, 1961, pp. 107.

Brickell, Henry M., State Organization for Educational Change: A Case Study and a Proposal, in Matthew B. Miles, ed., Innovation in Education. New York: Bureau of Publications, Teachers College, Columbia University, 1964, pp. 493-531.

Buchanan, Paul C., Crucial Issues in Organizational Development, in Goodwin Watson, ed., Change in School Systems. Washington, D.C.: National Training Laboratories, N.E.A., 1967.

Citizens for the 21st Century, Long Range Considerations for California Elementary and Secondary Education, Report from the State Committee on Public Education to the State Board of Education, June, 1967.

Foskett, John M., Sociology and Educational Administration -- A Discussion. Eugene: University of Oregon, 1965.

Goldhammer, Keith, The School Board. New York: The Center for Applied Research in Education, Inc., 1964.

Goodson, Max R., Models for Effecting Planned Educational Change, in Occasional Paper No. 3, Project MODELS: Maximizing Opportunities for Development and Experimentation in Learning in the Schools. Report prepared for U. S. Office of Education by the Research and Development Center for Learning and Re-Education, The University of Wisconsin, 1966.

Goodwin, William L., Project MODELS and the Conduct of Controlled Experiments in School Settings, in Occasional Paper No. 3, Project MODELS: Maximizing Opportunities for Development and Experimentation in Learning in the Schools. Report prepared for U. S. Office of Education by the Research and Development Center for Learning and Re-Education, The University of Wisconsin, 1966.

Guetzkow, Harold, The Creative Person in Organizations, in Gary A. Steiner, ed., *The Creative Organization*. Chicago: University of Chicago Press, 1965.

Hill, Edward E., Donn B. Wallace and Marvin J. Rosen, The Planning of a Supplementary Program of Educational Services to Stimulated Innovation in the Design of Instructional Systems and Program Validation Techniques. Final Technical Report: USOE Contract No. 4-6-000491-0382, November 1, 1966.

Hills, Jean, *Some Problems of Educational Organization in Comparative Perspective*. Eugene: University of Oregon, 1965.

*Klausmeier, Herbert J., Project Models: Its Inception and Rationale, In Occasional Paper No. 3, Project Models: Maximizing Opportunities For Development and Experimentation in Learning in the Schools. Report prepared for U.S. Office of Education by the Research and Development Center for Learning and Re-education, The University of Wisconsin, 1966.

McKee, Robert L., and Kathryn J. Ridley, *Documentation of Steps to Establish a Technical College, and the Evaluation of "Pert" as a Planning Tool for Educators, Phase 1*. Baileys Crossbroads, Va.: Northern Virginia Tech. Coll., March 31, 1966.

*Miles, Matthew B., Planned Change and Organizational Health: Figure and Ground, in *Change Process in the Public Schools*, Richard O. Carlson, *et.al*., eds., (Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1964).

Morphet, Edgar L., and Ryan, Charles O. (eds), *Planning and Effecting Needed Change in Education* (Designing Education for the Future, Number 3). New York: Citation Press, 1967.

Pellegrin, Roland J., The Place of Research in Planned Change, in Richard O. Carlson and others, *Change Processes in the Public Schools*. Eugene: Center for the Advanced Study of Educational Administration. University of Oregon, 1965, pp. 65-75.

Prasch, John, R & I Units and the Solution of Local Educational Problems, in Occasional Paper No. 3, Project MODELS: Maximizing Opportunities for Development and Experimentation in Learning in the Schools. Report prepared for U. S. Office of Education by the Research and Development Center for Learning and Re-Education, The University of Wisconsin, 1966.

Ribble, Robert B., The effect of planned change on the classroom, *Theory into Practice*, Vol. V., No. 1, 41-45, February 1966.

Runkel, Philip J., *Some Recent Ideas in Research Methodology*. Paper presented at a Conference on New Directions in Research on Educational Administration. Eugene: University of Oregon, 1965.

Sayres, William C., *Recurring Reasons for Resistance to Centralization*. Albany, N. Y.: The State Education Department, Division of Research, 1960, pp. 17.

Schmuck, Richard, Social Psychological Factors in Knowledge Utilization as Applied to Educational Administration, Working Paper: University of Oregon, August 1967.

Sieber, Sam D. and Paul F. Lazarsfeld, *The Organization of Educational Research in The United States*. Columbia University Bureau of Applied Social Research, 1966.

Steiner, Gary A., ed., *The Creative Organization*. Chicago: University of Chicago Press, 1965.

Tumin, Melvin M. and Marvin Bressler, *Conference on Quality and Equality in Education*. A 3-day Conference at Princeton University, New Jersey, 1966.

Usdan, Michael D., *Research Seminar on Racial and Other Issues Affecting School Administration in the Great Cities of America*. Evanston, Ill.: Northwestern University, 1966.

Zeigler, Harmon, *Political Values in Education*. Eugene: University of Oregon, 1965.

Processes and Strategies for Educational Change

Ayars, Albert L., A Study of Student Achievement in Spokane High School with Different Organizational Patterns, Report No. 8, Research Department, Spokane Public Schools, Spokane, Washington, March 31, 1967.

Bemis, Haynard and William McClure, *Symposium in Occupational Education, Manpower, and Economic Change in the United States, Final Report*. Bloomington, Ind.: Phi Delta Kappa Inc., July 1966.

*Carlson, Richard O., Barriers to Change in Public Schools, Change Process in the Public Schools, Richard O. Carlson, et. al., eds., (Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1964).

Center for the Advanced Study of Educational Administration. *Change Processes in the Public Schools*. Eugene, Ore.: the Center, 1965, pp. 92.

Central Midwestern Regional Educational Laboratory: *Proceedings of the Conference on Innovative Practices and the Process of Change in Education*. St. Louis: The Laboratory, 1966.

Cocking, Walter. *The Regional Introduction of Educational Practices in Urban School Systems of the United States*. New York: Bureau of Publications, Teachers College, Columbia University, 1951, pp. 86.

College Entrance Examination Board. *The Challenge of Curricular Change*. Princeton, New Jersey: the Board, 1966, pp. 151.

Conference on Strategies for Educational Change. Sponsored jointly by USOE and Ohio State University. *SEC Newsletter*, Ohio State University, Vol. I, No. 4, December, 1965.

Culbertson, Jack A., *Organizational Strategies for Planned Change in Education*. Paper presented at the Conference on Strategies for Educational Change, Washington, D.C., November 8-10, 1965.

Culbertson, Jack A., (issue editor). Changing the School, *Theory Into Practice*, Vol. 2, No. 5, December, 1963.

*Gallaher, Art Jr., Directed Change in Formal Organizations: The School System, *Change Processes in the Public Schools*, Richard O. Carlson et. al., eds., (Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1964).

Goldhammer, Keith, *Issues and Strategies in the Public Acceptance of Educational Change*. Eugene: University of Oregon, November 18, 1965.

Guba, Egon G., *Methodological Strategies for Educational Change*, Paper presented to the Conference on Strategies for Educational Change, Washington, D.C., November 8-10, 1965.

Harris, Seymour E., Kenneth M. Deitch, and Alan Levensohn. *Challenge and Change in American Education*. Berkeley, California: McCutchan Publishing Corporation, 1965, pp. 346.

* Heck, James B., An Analysis of Change in Public Education, (Columbus, Ohio: The Evaluation Center, College of Education, The Ohio State University, 1967).

Heinrich, June Sark. *How to Bring About Change in a School System.* (Teacher Education Extension Service, Unit Eight.) Chicago: Science Research Associates, Inc., May 1966, pp. 22.

Johnson, Donald W., *The Dynamics of Educational Change*. Sacramento: California State Department of Education, Vol. 32, No. 3, September 1963, pp. 181.

Jongeward, Ray E., *Improvement of Instruction in Washington Schools.* Olympia, Washington: Superintendent of Public Instruction, 1962, pp. 272.

Jung, Charles and Ronald Lippitt, The study of change as a concept in research utilization, *Theory into Practice*, Vol. V, No. 1, 25-29, February 1966.

Kurland, Norman D., and Miller, Richard F., *Selected and Annotated Bibliography on the Processes of Change*. Lexington: University of Kentucky, 1966.

Leeper, Robert R., (ed.). *Curriculum Change: Direction and Process*. Washington, D. C.: Association for Supervision and Curriculum Development, 1966, pp. 68.

Leeper, Robert R., (ed.). *Strategy for Curriculum Change*, Papers from the First ASDC Seminar on Strategy for Curriculum Change. Washington, D.C.: Association for Supervision and Curriculum Development, 1965, pp. 75.

Lewis, Philip. Emerging Technology and Instructional Systems, *The National Elementary Principal*, 43: 34-52; September 1963.

Lippitt, Ronald, Roles and Processes in Curriculum Development and Change, in *Strategy for Curriculum Change*. Papers from the ASCD Seminar on Strategy for Curriculum Change, New Orleans, January 1965. Washington, D.C.: Association for Supervision and Curriculum Development, 1965, pp. 11-28.

Mackie, R.R. and Christensen, P.R. Translation and Application of Psychological Research. Technical Report 716-1. Human Factors Research, Inc., Santa Barbara Research Park, Goleta, California 1967.

Michigan Department of Public Instruction. *Five Years of Change*. Lansing, Michigan, 1964, pp. 25.

Mierhenry, W. C. *A Criterion Paper on Parameters of Education*. A paper prepared for the Conference on Strategies for Educational Change, sponsored by The Ohio State University. Lincoln, Nebraska: Teachers College, University of Nebraska, 1965, pp. 27.

Miller, Richard I. (ed.). A Multidisciplinary Focus on Educational Change. Vol. 38, No. 2. Lexington, Ky.: Bureau of School Service, College of Education, University of Kentucky, 1965 , pp. 84.

Miller, Richard I. Research, Development and Change in the United States. A paper prepared for the international conference on Emerging Strategies and Structures for Educational Change. Toronto, Canada: June 12-15, 1966 , pp. 9.

Miller, Richard I. The Process of Change and Title III. A report of the panel on the process of change at a special United States Office of Education Conference on Title III of the Elementary and Secondary Education Act of 1965. Washington, D. C.: May 16-17, 1966, pp. 16.

Murphy, Gardner. Motivation and Curriculum Change. A paper prepared for the second ASCD Seminar on Strategy for Curriculum Change. Atlanta, Ga.: 1966 , pp. 11.

Newsletter of the Conference on Strategies for Educational Change. Ohio State University, (all issues).

Nyquist, Ewald B. Emerging Strategies and Structures for Educational Change. Remarks delivered at the Toronto, Ontario, conference sponsored by the Ontario Institute for Studies in Education. Albany, N.Y.: The State Education Department, Deputy Commissioner of Education, 1966, pp. 35.

Pellegrin, Roland J. An Analysis of Sources and Processes of Innovation in Education. A paper presented at the Conference on Educational Change sponsored by the Demonstration Project for Gifted Youth and the U. S. Office of Education. Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1966 , pp. 32.

Pellegrin, Roland J., Community Power Structure and Educational Decision-Making in the Local Community. Paper read at the 1965 National Convention of the American Association of School Administrators, Atlantic City, N.J., February 15, 1965. Eugene: University of Oregon, 1965.

Pellegrin, Roland J., Social Paritictpation Patterns and the Communications Process, in Financing the Changing School Program, N.E.A., 1962.

Research Report No. 07-09C; Washington State Inventory of Educational Change Part Three: Innovations in Washington Education. Olympia: Office of Superintendent of Public Instruction, November 1967.

Rogers, Everett M., Toward a New Model for Educational Change. Paper presented at the Conference on Strategies for Educational Change, Washington, D. C., November 8-10, 1965.

Rogers, Everett M., Developing a Strategy for Planned Change. Paper presented on Application of System Analysis and Management Techniques to Educational Planning in California, Orange, California, June, 1967.

Stanley, Julian C., *Benefits of Research Design--A Pilot Study, Final Report*. Madison: University of Wisconsin, August 1966.

Trachtman, Gilbert M. *The Evils of Educational Change*. A paper presented at the Joint Conference of Council of School Superintendents and New York State Association of School District Administrators. New York: New York University, September 1964, pp. 15.

Watson, Goodwin, ed., *Change in School Systems*. Washington: National Training Laboratories, NEA for Cooperative Project for Educational Development, 1967.

Watson, Goodwin, ed., *Concepts for Social Change*. Washington: National Training Laboratories, NEA for Cooperative Project for Educational Development, 1967.

Change Agent and Roles

Anderson, Richard C. The Role of Educational Engineer, *The Journal of Educational Sociology*, Vol 34: 377-381; 1961.

*Carson, Robert B., Keith Goldhammer, and Roland J. Pellegrin, *Teacher Participation in Community Activities: A Study of Roles and Role Expectations*. Eugene: Center for the Advanced Study of Educational Administration, University of Oregon, 1967.

*Chesler, Mark, Richard Schmuck, and Ronald Lippitt, The Principal's Role in Facilitating Innovation, *Theory Into Practice*, Vol. 2, December, 1963, pp. 269-277.

Clark, David L. and Egon Guba, *An Examination of Potential Change Roles in Education*, Paper presented to the Symposium on Innovation in Planning School Curricula, Arlie House, Virginia, October 1965.

Croft, John C., *Open-Mindedness Among Administrators*. Eugene: University of Oregon, 1965.

*Currie, Craig H., *Secondary School Principals' Assessment of the Importance of Personal and Situational Factors in the Adoption of Innovations* (University of Oregon, Dissertation Abstact *27*, 3A, 1966).

Edmonds, Fred and Others, *Developing Procedures for the Inservice Education of School Administration*. Lexington: Coll. of Education., University of Kentucky, 1966.

Eye, Glen G., et. al., Relation Between Institutional Change and the Extent to which School Administrators and Teachers Agree on the Location of Responsibilities for Administrative Decisions. Madison: University of Wisconsin, 1966 (Mimeographed). Prepared for the Department of Health, Education and Welfare, Project #5-0443 (1913), 1966.

Gilbert, Harry B. and Others, Teacher Selection Policies and Procedures in Large Public School Systems in the United States. New York: City University of New York, Hunter College, 1966.

Goldhammer, Keith, Factors Related to Citizen, Administrator, and Teacher Participation in Educational Decision-Making. Eugene: University of Oregon, 1965.

Hills, Jean, The Functions of Research for Educational Administration. Eugene: University of Oregon, 1965.

Hughes, Larry W., A Study of Administrative Arrangements in Different Types of School Districts. Columbus: Ohio State University, 1965.

Jung, Charles C., The Trainer Change-Agent Role within a School System, in Goodwin Watson, ed., Change in School Systems. Washington, D.C.: National Training Laboratories, N.E.A., 1967.

*Klingenberg, Allen J., A Study of Selected Administrative Behaviors Among Administrators from Innovative and Non-innovative Public School Districts (Michigan State University, Dissertation Abstract 27, 9A, 1966)

Meade, Edward J., Jr. What Mechanisms for Innovation Must the Schools Have? A paper prepared for the Governor's Conference on Education, State of New Jersey. New Brunswick, N.J.: April 2, 1966, pp. 7.

O'Kane, Robert M., How Can Teachers Become Instrumental in the Process of Innovation and Improvement? A paper prepared for the Governor's Conference on Education, State of New Jersey. New Brunswick, N.J.: April 2, 1966, pp. 11.

Rogers, Everett M., What Are Innovators Like? in Richard O. Carlson and others, Change Processes in the Public Schools. Eugene: Center for the Advanced Study of Educational Administration, University of Oregon, 1965, pp. 55-61.

Diffusion

Abbott, Max G., Hierarchical Impediments to Innovation in Educational Organizations, in Max G. Abbott and John T. Lowell, eds., *Change Perspectives in Educational Administration*. Auburn, Ala.: School of Education, Auburn University, 1965, pp. 40-53.

Bushnell, Don D., Robert A. Freeman and Malcolm Richland, Interim Report: Proceedings of the Conference on the Implementation of Educational Innovations. Report prepared by Systems Development Corporation, Santa Monica, for U. S. Office of Health, Education and Welfare. Contract No. OE-4-16-007, October 5, 1964.

Carlson, Richard O., Barriers to Change in Public Schools, in Richard O. Carlson and others, *Change Processes in the Public Schools*. Eugene: Center for the Advance Study of Educational Administration, University of Oregon, 1965, pp. 3-8.

Carlson, Richard O., *Strategies for Educational Change: Some Needed Research on the Diffusion of Innovations*. Paper presented at the Conference on Strategies for Educational Change, Washington, D.C.: November 8-10, 1965.

Carter, L. F. From Research to Development to Use. SP-2332, System Development Corporation, Santa Monica, 1966. Also in: Technology in Education. Hearings before the Subcommittee on Economic Progress of the Joint Economic Committee Eighty-ninth Congress, Second Session, U. S. Government Printing Office 1966.

Chesler, Mark and Mary Flanders, Resistance to Research and Research Utilization: The Death and Life of a Feedback Attempt *Journal of Applied Behavioral Science*, Vol. 3, No. 4, 1967,

Edgerton, Harold A. and Robert W. Sylvester, *The Prediction of Outcomes of MDTA Programs, A Pilot Study*. Washington, D.C.: Performance Research Inc., February 15, 1966.

Goldhammer, Keith and Stanley Elam (eds.). *Dissemination and Implementation.* Bloomington, Ind.: Phi Delta Kappa, 1962, pp. 200.

Goodlad, John I. *Innovations in Elementary and Secondary Education.* A paper prepared for the Governor's Conference on Education, State of New Jersey. New Brunswick, N.J.: April 2, 1966, pp. 12.

Guba, Egon G., *The Impending Research Explosion and Educational Practice*. Paper presented in the Summer Lecture Series, College of Education, Kent State University, July 10,1965.

Lindquist, E. F. and Others, *Educational Information Project*. Iowa City: University of Iowa, 1966.

Miles, Matthew B. (ed.). *Innovation in Education*. New York: Bureau of Publications, Teachers College, Columbia University, 1964, pp. 689.

Miller, Richard I. (ed.). *Perspectives on Educational Change*. New York: Appleton-Century-Crofts, 1966. In press.

Mort, Paul R. Studies in Educational Innovation from the Institute of Administrative Research: An Overview, Institute of Administrative Research *Bulletin*. New York: Columbia University, Teachers College, Vol. 3, October 1962, pp. 8.

Mort, Paul R. and Francis G. Cornell. *American School In Transition*. New York: Bureau of Publications, Teachers College, Columbia University, 1941, pp. 528.

Pellegrin, Roland J., Social Participation Patterns and the Communications Process, in *Financing the Changing School Program*. Washington, D. C.: National Educational Association, 1962, pp. 130-135.

Richland, Malcolm. *Final Report: Traveling Seminar and Conference for the Implementation of Education Innovations.* Santa Monica, Calif.: System Development Corporation, 1965, pp. 140.

Schmuck, Richard. Social Psychological Factors in Knowledge Utilization as Applied to Educational Administration, Paper delivered at Conference on Knowledge Production and Utilization in Educational Administration Sponsored by University of Oregon, October 23-25, 1967.

School District of University City. *The Impact of New Ideas in Education*. Vol. 2 University City, Missouri: the District, 1965, pp. 64.

Sowards, G. Wesley. Innovations in Social Studies, *The National Elementary Principal*, Vol. 43: 28-33; September, 1963.

Strickland, Ruth G. Innovations in the Language Arts, *The National Elementary Principal*, Vol 43: 53-60; September, 1963.

*Stufflebeam, Daniel L., Catalog of Educational Changes in Ohio Public Schools, Ohio Educational Innovations Survey, College of Education, The Ohio State University, Columbus, Ohio, 1966.

Wenrich, Ralph C., *A State Program for the Development of Persons for Leadership Roles in the Administration of Local Programs of Vocational and Technical Education*. Ann Arbor: University of Michigan, 1966.

Adoption

*Carlson, Richard O., Adoption of Educational Innovations, Center for Advanced Study of Educational Administration. University of Oregon, Eugene, Oregon, 1965.

*Carter, Launor F., From Research to Development to Use, Santa Monica System Development Corporation. Paper presented at a symposium sponsored by the American Educational Research Association, Phi Delta Kappa, February, 1966.

*Carter, Launor F., Knowledge Production and Utilization in Contemporary Organizations, In Conference on Knowledge Production and Utilization in Educational Administration: Role Emergency and Reorganization. Co-sponsored by the University of Oregon and University Council for Educational Administration, Portland, Oregon, October 22-25, 1967.

*Ebel, Robert L., Some Limitations of Basic Research in Education, A paper presented in AERA Symposium on Basic Applied Research and Public Policy, New York City, February 16, 1967.

*Flanagan, John C., Using Research and Development to Improve Education. A Paper presented at the 1967 annual meeting of the American Educational Research Association. Symposium on Basic and Applied Research and Public Policy, February 16, 1967.

Glaser, E. M. Utilization of Applicable Research and Demonstration Results. Human Interaction Research Institute, Los Angeles, California, 1967.

Goldhammer, Keith and Frank Farmer. The Jackson County Story. Eugene, Oregon: Center for the Advanced Study of Educational Administration, University of Oregon, 1964, pp. 52.

*Guba, Egon G , Development, Diffusion and Evaluation, In Conference on Knowledge Production and Utilization in Educational Administration: Role Emergency and Reorganization, Co-sponsored by the University of Oregon and the University Council for Educational Administration, Portland, Oregon, October 22-25, 1967.

Kentucky State Department of Education. Educational Change in Kentucky Public Schools. Frankfort, Ky.: the Department, 1964, pp. 122.

Miles, Matthew, Data Feedback and Organizational Change in a School System. Paper read at American Sociological Association Meeting, August, 1966. Teachers College, 1966.

Mort, Paul R. Educational Adaptability. New York: Metropolitan School Study Council, Teachers College, Columbia University, n.d. pp. 23.

National Association of Secondary-School Principals. Changing Secondary Schools, *The Bulletin*. Vol. 47, No. 283, May 1963, pp. 168.

*Research Report No. 07-01, Improvement of Instruction in Washington Schools, October 1962 - Office of Superintendent of Public Instruction, Olympia, Washington.

*Research Report No. 07-09A, Washington State 1966 Inventory of Educational Change, Part One: A Look Back, Olympia, Wash.: Office of Superintendent of Public Instruction, April, 1967.

*Research Report No. 07-09B, Washington State 1966 Inventory of Educational Change, Part Two: Preliminary Report, Olympia, Wash.: Office of Superintendent of Public Instruction, June, 1967.

Research Utilization Committee, Various working papers distributed by the Committee. American Education Research Association, Washington, D.C.

Rogers, Carl, Toward a Science of the Person, *Journal of Humanistic Psychology*, Fall, 1963, pp. 77-92.

Ross, Donald H. (ed.). *Administration for Adaptability*. New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958, pp. 643.

Theory Into Practice, (Ohio State University - all issues).

Decision-Making

*Addington, Robert J., *A Sampling Technique for Administrative Decision-Making in Education* (University of Southern California, Dissertation Abstract *26*, 1965).

*Bond, Betty Wells, *The Group Discussion - Decision Approach - An Appraisal of its Use in Health Education* (University of Minnesota, Dissertation Abstract *16*, 1956).

*Bumbarger, Chester, S., *Differences in Teacher and Adminstrator Perceptions of Public School Decision-Making: A Comparative Study in Selected Oregon School Districts* (University of Oregon, Dissertation Abstract *27*, 9A, 1966).

*Carson, Robert B., *Teacher Participation in Decision-Making in Education and Other Local Community Activities in Three Oregon Communities* (University of Oregon, Dissertation Abstract *26*, 1965).

*Curtis, James P., *A Study of the Focused Interview as a Technique for Analysing Decision-Making Processes in Educational Administration* *(Research Study No. 1)* (Colorado State College, Dissertation Abstract 25, 1963).

*Darling, David W., *The Development of a Decision-Making Model and the Empirical Testing of the Model Using Selected Elementary School Principals in Decision-Making Situations* (The University of Texas Dissertation Abstract 25, 1964).

*Fawley, Richard M., *Teacher Freedom to Make Instructional Decisions and Its Relation to Classroom Techniques and Staff Morale* (The University of Texas, Dissertation Abstract 27, 02A, 1966).

*Greer, John T., *A Study of the Decisions of Four Selected High Schools Principals* (Northwestern University, Dissertation Abstract 22, 1961).

*Holden, Louis E., *Communication and Decision-Making in School Board-Superintendent Relations: A Case Study* (University of Oregon, Dissertation Abstract 2, 1961).

*Houston, Harry H., *An Inquiry into the Administrative Process as It Relates to Decision-Making* (Rutgers University, Dissertation Abstract 20, 1959).

*Inabnit, Darrell James, *Characteristics of Teacher Participation in Decision-Making Functions of Public-School Administration: An Empirical Investigation of Teacher Participation in Policy-Making and Related Factors in Four Illinois Public School Systems* (University of Illinois, Dissertation Abstract 14, 1954).

*Johansen, John H., *An Investigation of the Relationships Between Teachers' Perceptions of Authoritative Influences in Local Curriculum Decision-Making and Curriculum Implementation* (Northwestern University, Dissertation Abstract 26, 1965).

*Kirby, Inabell, T., *An Approach to Decision Making* (University of Illinois, Dissertation Abstract 26, 1965).

*Kutzleb, Edward L., *A Study of the Effects of Selected Types of Personal Interaction on Decision-Making in Groups of Varying Sizes* (Research Study No. 1) (Colorado State College, Dissertation Abstract 24, 1963).

Lohman, Maurice A., and William C. Sayres. *Why People Vote No: Case Study Observations*. Albany, N.Y.: The State Education Department, Division of Research, 1960, pp. 45.

*McDonald, Donald Victor, *A Study of a Community to Determine Patterns of Decisions on Selected Controversial Issues in the Public School* (Cornell University, Dissertation Abstract 16, 1956).

*McLeod, Mack E., *Domain for Decision: The Development and Testing of a Rationale for the Allocation of Problems for Decisions* (The University of Texas, Dissertation Abstract 26, 1965).

*Moritz, Albert F., *The Relationship of Educational Administration to Decision-Making in Science Education* (The Ohio State University, Dissertation Abstract 26, 1965).

*Nelson, Marion B., *An Analysis of Administrative Decision Making Through the Empirical Testing of a Model* (North Texas State University, Dissertation Abstract 27, 4A, 1966).

*Newberry, William C., *The Elementary Principal's Influence and Decision-Making Role* (University of Texas, Dissertation Abstract 27, 7A, 1966).

Pankove, Ethel, *The Relationship Between Creativity and Risk Taking in Fifth-Grade Children*. New Brunswick, N.J.: Graduate School of Education, Rutgers, The State University, September 1966.

*Poe, Robert L., *The Construction of a Mathematical Model of Educational Administration Decision-Making* (Oklahoma State University, Dissertation Abstract 25, 1963).

*Rasof, Elvin I., *An Approach to Optimal Decision-Making in Selected Areas of Education* (Wayne State University, Dissertation Abstract 26, 1965).

*Reinke, Kenneth H., *Authority Structure and Decision-Making in School Systems* (The University of Wisconsin, Dissertation Abstract 25, 1964).

*Roe, Arnold, *An Adaptive Decision Structure for Educational Systems* (University of California, Los Angeles, Dissertation Abstract 25, 1964).

*Sands, David A., *The Content of Decisions Made at Different Hierarchical Levels in the Administration of Public Elementary and Secondary Schools in Texas* (The University of Texas, Dissertation Abstract 25, 1964).

Schmuck, Richard, Mark Chesler, and Richard Lippitt, *Problem Solving to Improve Classroom Learning*. Chicago: Science Research Associates, Inc., 1966.

*Shock, Donald P., *Patterns in the Decision Making Process of a School Board* (Stanford University, Dissertation Abstract 21, 1960).

*Short, Richard R., *Administrative Decision-Making Procedure as Related to Good Secondary Schools* (The University of Nebraska Teachers College Dissertation Abstract 23, 1962).

*Smittle, George, B., *A Study of the Perceptions of Teacher Involvement in Critical and Routine Decisions in Selected Schools of Ohio* (The Ohio State University, Dissertation Abstract 26, 1962).

*Sproule, Joseph R., Decision-Making Processes of Boards of Education (Cornell University, Dissertation Abstract 26, 1966).

Stern, Carolyn, Children's Use of Knowledge of Results in Thinking. Los Angeles: University of California, 1966.

*Thomas, Lawrence, F., An Analysis of the Instructional Leadership of the Secondary School Principal in the Decision-Making Process (University of Arizona, Dissertation Abstract 24, 1963).

*Tornow, Eugene W., A Study of the Relationship of Teachers' Perceptions of Decision Points and the Interactions of the Superintendent of Schools, the Director of Instruction and High School Principal (The University of Wisconsin, Dissertation Abstract 27, 3A, 1965).

*Ward, William T., An Analysis of the Decision-Making Process In An Oregon High School: A Case Study (University of Oregon, Dissertation Abstract 20, 1959).

*Ziegler, Walter J., The Bases and Process for Decision-Making by the Superintendent of Schools (University of Southern California, Dissertation Abstract 25, 1964).

Innovation

Barnett, H. G., Innovation: The Basis of Cultural Change. New York: McGraw-Hill Book Company, Inc., 1953.

Bhola, Harbans Singh. Innovation Research and Theory. Columbus, Ohio: School of Education. The Ohio State University, 1965, pp. 155. (Mimeograph.)

*Camaren, Reuben J., Innovation as a Factor Influencing the Diffusion and Adoption Process (University of California, Berkeley, Dissertation Abstract 27, 3A, 1966).

*Cawelti, Gordon, Innovative Practices in High Schools: Who Does What - and Why - and How, Nation's Schools, April 1967.

Clark, David L. and Egon G. Guba. Innovation in School Curricula. A paper prepared for a conference on Innovation in Planning School Curricula, sponsored by the Center for the Study of Instruction. Washington, D.C.: the center, National Education Association, 1965, pp. 33.

*Doughty, Billie M., Some Factors Affecting Innovation as Identified in Educational Literature and as Perceived by Selected Teachers (University of Alabama, Dissertation Abstract 27, 9A, 1966).

Ehling, William P., Development of a Computer Model of the Factors Which Influence High School Students to Continue or Discontinue Their Education. New York: Syracuse University, 1966.

*Eibler, Herbert J., A Comparison of the Relationships Between Certain Aspects of Characteristics of the Structure of the High School Faculty and the Amount of Curriculum Innovation (The University of Michigan, Dissertation Abstract 26, 1965).

*Goetz, Francis, R., Innovation and the Public Elementary School Principal (Wayne State University, Dissertation Abstract 26, 1965).

*Hanson, John O., A Descriptive Study of Basic Data and the Educational Innovations Found in Twenty-two Selected North Dakota Small Schools (The University of North Dakota, Dissertation Abstract 27, 6A, 1966).

Heathers, Glen. The Role of Innovation in Education, The National Elementary Principal, Vol 43: 8-14; September 1963.

*Kindsvatter, Richard H., The Dynamics of Change in Marking Systems in Selected Innovative and Non-Innovative High Schools of Ohio (The Ohio State University, Dissertation Abstract 27, 9A, 1966).

*Lewis, Philip, Emerging Technology and Instructional Systems, The National Elementary Principal, Vol. 43, pp. 34-52, September 1963.

Mackenzie, Gordon N., Curricular Change: Participants, Power, and Processes, in Matthew M. Miles, ed., Innovation in Education. New York: Bureau of Publications, Teachers College, Columbia University, 1964, pp. 399-424.

Meierhenry, W. C., ed., Media and Educational Innovation, Symposium, University of Nebraska: University of Nebraska Press, 1964.

Panel on Educational Research and Development, The President's Science Advisory Committee. Innovation and Experiment in Education. Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1964, pp. 79.

*Pellegrin, Roland J., An Analysis of Sources and Processes of Innovation in Education. A Paper presented at the Conference of Educational Change, Sponsored by Demonstration Project for Gifted Youth and the U. S. Office of Educational Allerton Park, Illinois, February 28, 1966.

*Perry, Dorothy M., Patterns of Selected Innovations in Detroit Elementary Schools 1895-1945 (Wayne University, Dissertation Abstract 12, 1952).

*Richland, Malcolm, Traveling Seminar and Conference for the Implementation of Educational Innovations, Final report prepared for the United States Office of Education by System Development Corporation, Santa Monica, California, 1965.

*Rogers, Everett M., What are Innovators Like? *Change Process in the Public Schools*, Richard O. Carlson, et. al., eds., (Eugene, Ore.: Center for the Advanced Study of Educational Administration, 1964).

Southwestern Cooperative Educational Laboratory, *Fostering and Reinforcing Innovative Behavior of Selected School Personnel*. Alburquerque: The Laboratory, 1966.

Symposium on Identifying Techniques and Principles for Gaining Acceptance of Research Results of Use of Newer Media in Education. *Media and Educational Innovation*. Lincoln, Nebraska: Teachers College, University of Nebraska, 1964, pp. 341. (Mimeograph)

*Wailes, James R., Science Innovations, *The National Elementary Principal*, Vol. 43, pp. 22-27, September 1963.